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Exhibit Number	:	ORA - _____
Commissioner	:	Catherine Sandoval
Administrative Law Judge	:	Jeanne McKinney
ORA Witness	:	Daphne Goldberg



ORA  
OFFICE OF RATEPAYER ADVOCATES



**OFFICE OF RATEPAYER ADVOCATES**  
**CALIFORNIA PUBLIC UTILITIES COMMISSION**

**\*\*\* PUBLIC VERSION (redacted) \*\*\***

**REPORT ON PLANT  
FOR DIXON, LIVERMORE, LOS ALTOS, MARYSVILLE,  
OROVILLE, AND WILLOWS DISTRICTS**

**California Water Service Company  
Test Year 2017 General Rate Case  
A.15-07-015**

**San Francisco, California  
March 2016**

## MEMORANDUM

This Report on Plant for California Water Service Company GRC A.15-07-015 is prepared by Daphne Goldberg, under the general supervision of Program Manager Danilo Sanchez, and Program & Project Supervisor Ting-Pong Yuen of the *Office of Ratepayer Advocates (ORA) - Water Branch*. Ms. Goldberg's Statement of Qualifications is in Chapter 7 of ORA's Company-Wide Report on Results of Operations. Kerriann Sheppard and Christa Salo serve as ORA legal counsels.

# **Report on Plant for Dixon, Livermore, Los Altos, Marysville, Oroville, and Willows Districts**

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## Chapter 1: EXECUTIVE SUMMARY

### A. INTRODUCTION

This report presents ORA's analysis and recommendations on Plant in Service for the Dixon, Livermore, Los Altos, Marysville, Oroville, and Willows districts in General Rate Case Application (A.) 15-07-015 filed by California Water Service Company ("Cal Water" or "CWS"). The recommendations herein also reflect recommendations in ORA's Report on Plant - Common Issues which address issues affecting plant estimates for most or all CWS's districts.

### B. RECOMMENDATIONS

**Table 1-A** below provides a summary of recommended capital budgets for the districts covered in this report. Chapters 2 through 7 of this report present plant analysis and recommendations for Dixon, Livermore, Los Altos, Marysville, Oroville, and Willows districts, respectively.

**Table 1-A: Capital Budget Summary - ORA's Recommended Plant Additions**

ORA Estimates (\$000)	2015	2016	2017	2018	Annual Average
Dixon	\$ 220.0	\$ 147.5	\$ 148.4	\$ 103.8	\$ 154.9
Livermore	\$ 974.5	\$ 1,797.8	\$ 1,566.0	\$ 1,654.0	\$ 1,498.1
Los Altos	\$ 1,990.1	\$ 3,347.4	\$ 3,229.5	\$ 3,532.1	\$ 3,024.8
Marysville	\$ 63.1	\$ 483.6	\$ 487.6	\$ 496.8	\$ 382.8
Oroville	\$ 292.0	\$ 815.4	\$ 1,155.6	\$ 838.8	\$ 775.5
Willows	\$ 338.3	\$ 101.9	\$ 99.9	\$ 158.6	\$ 174.7

## Chapter 2: Plant – Dixon District

### A. INTRODUCTION

This chapter presents ORA’s analyses and recommendations for Plant in Service for CWS’s Dixon District.

### B. SUMMARY OF RECOMMENDATIONS

Based on ORA’s review and analysis of CWS’s requested plant additions, ORA recommends disallowance, adjustment, deferral, or Advice Letter treatment where appropriate. These recommendations form the basis of ORA’s recommended capital budget summary presented in **Table 2-A** below. ORA’s estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding Pipeline Replacements, Meter Replacements, Vehicle Replacements, and Supervisory Control and Data Acquisition (SCADA) Upgrade. **Table 2-B** presents ORA project-specific adjustments.

1

**Table 2-A: Capital Budget Summary – Dixon District**

Dixon (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 220.0	\$ 147.5	\$ 148.4	\$ 103.8	\$ 154.9
CWS	\$ 353.7	\$ 606.8	\$ 357.4	\$ 660.8	\$ 494.7
CWS > ORA	\$ 133.7	\$ 459.3	\$ 209.0	\$ 557.0	\$ 339.7
ORA as % of CWS	62%	24%	42%	16%	36%

2

3

**Table 2-B: Capital Budget Details – Dixon District**

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00063972	Field - New Handhelds for Meter Reading	\$ -	\$ 11,094	\$ 11,094	0%
	00065069	Vehicle - 0.5 Ton Pick Up & Outfitting	\$ -	\$ 41,650	\$ 41,650	0%
	DIX0900	Meter Replacement Program	\$ -	\$ 28,480	\$ 28,480	0%
	00061632	Replace Pump & Column - Sta. 8-01	\$ 134,967	\$ 134,967	\$ -	100%
	00017348	Flowmeter Replacement Program (3)	\$ 67,048	\$ 67,048	\$ -	100%
	DIX0520	DIX Unsch Valve Casings and Covers	\$ -	\$ -	\$ -	0%
	DIX0530	DIX Unsch Hydrant Replacements	\$ -	\$ -	\$ -	0%
	DIX0540	DIX Unsch Main Valve Replacements	\$ -	\$ -	\$ -	0%
	DIX0800	INSTALL / RETIRE METERS	\$ -	\$ -	\$ -	0%
<b>Specifics Carryover Total</b>			\$ -	\$ 81,224	\$ 81,224	0%
<b>Non-Specifics Total</b>			\$ 17,988	\$ 70,450	\$ 52,462	26%
<b>Carry-Overs Total</b>			\$ 202,014	\$ 202,014	\$ -	100%
<b>TOTAL 2015</b>			\$ 220,002	\$ 353,688	\$ 133,686	62%

4

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	97857	Install Standby generator for Customer center	\$ -	\$ 162,445	\$ 162,445	0%
	99202	The 2016 main replacement program will replace 849 feet of pipelines in the Dixon district at an estimated cost of \$183 per foot.	\$ 88,192	\$ 231,627	\$ 143,435	38%
	98050	Hydrant Meter Reduced Pressure Principal Assembly	\$ 6,884	\$ 6,884	\$ -	100%
	DIX0900	Meter Replacement Program	\$ 10,915	\$ 10,915	\$ -	100%
	99123	Vehicle Replacements > 120,000 miles	\$ 41,521	\$ 88,505	\$ 46,984	47%
<b>Specifics Total</b>			\$ 147,512	\$ 500,376	\$ 352,864	29%
<b>Non-Specifics Total</b>			\$ -	\$ 106,400	\$ 106,400	0%
<b>Carry-Overs Total</b>			\$ -	\$ -	\$ -	-
<b>TOTAL 2016</b>			\$ 147,512	\$ 606,776	\$ 459,264	24%

5

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	99206	The 2017 main replacement program will replace 849 feet of pipelines in the Dixon district at an estimated cost of \$183 per foot.	\$ 90,273	\$ 237,417	\$ 147,144	38%
	99123	Vehicle Replacements > 120,000 miles	\$ 46,984	\$ -	\$ (46,984)	0%
	DIX0900	Meter Replacement Program	\$ 11,189	\$ 11,189	\$ -	100%
<b>Specifics Total</b>			\$ 148,446	\$ 248,606	\$ 100,160	60%
<b>Non-Specifics Total</b>			\$ -	\$ 108,800	\$ 108,800	0%
<b>Carry-Overs Total</b>			\$ -	\$ -	\$ -	0%
<b>TOTAL 2017</b>			\$ 148,446	\$ 357,406	\$ 208,960	42%

6

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	99168	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 294,518	\$ 294,518	0%
	99207	The 2018 main replacement program will replace 849 feet of pipelines in the Dixon district at an estimated cost of \$183 per foot.	\$ 92,335	\$ 243,353	\$ 151,018	38%
	DIX0900	Meter Replacement Program	\$ 11,468	\$ 11,468	\$ -	100%
<b>Specifics Total</b>			<b>\$ 103,803</b>	<b>\$ 549,339</b>	<b>\$ 445,536</b>	<b>19%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 111,500</b>	<b>\$ 111,500</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2018</b>			<b>\$ 103,803</b>	<b>\$ 660,839</b>	<b>\$ 557,036</b>	<b>16%</b>

### C. DISCUSSION

The Dixon District recorded \$1,524,435 per year in average gross plant additions for the most recent six-year period 2009-2014.<sup>1</sup> **Table 2-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

**Table 2-C: Capital Budget Proposals vs. Recorded Expenditures– Dixon District**

Dixon (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
<b>2009-2014 Recorded</b>	--	--	--	--	\$ 1,524.4	100%
<b>ORA</b>	\$ 220.0	\$ 147.5	\$ 148.4	\$ 103.8	\$ 154.9	10%
<b>CWS</b>	\$ 353.7	\$ 606.8	\$ 357.4	\$ 660.8	\$ 494.7	32%

ORA presents its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 Non-Specific projects (Section 2), 2015 budget (Section 3) and advice letters (Section 4) below.

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<sup>1</sup> Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

1       **1. Specific Projects**

2       ***a. Install Standby Generator for Customer Center (PID: 97857)***

3       CWS requests \$162,445 in 2016 to purchase and install a permanent generator and  
4       automatic transfer switch at the Dixon Customer Service Center, where the customers  
5       come to pay their bills and where the SCADA Master for the District is located. CWS  
6       states that it needs the generator because the Dixon Customer Service Center needs to  
7       remain in operation during a power outage. The Customer Service Center currently has  
8       an uninterruptible power supply (UPS) unit, which is a battery that can provide a power  
9       supply to the SCADA Master in case of a power outage.

10      CWS states that in developing this replacement request, it considered replacing the  
11      existing 2700-Watt (W) unit with a larger 25-KW UPS system, which can provide a  
12      power supply to the SCADA Master in case of a power outage. CWS decided not pursue  
13      this option because of higher costs and large battery size.<sup>2</sup> However, in response to  
14      ORA's inquiry about the cost of a larger UPS system, CWS provided the following:

15           As an example, a Powersonic 20 AH 12 volt battery is about 7 inches long, 7  
16           inches high and 3" wide and costs about \$50-\$60. The space requirement for  
17           1000 such batteries would be impossible to meet at the proposed site. For a 25  
18           kW UPS which needs 1000 batteries, it would be about \$50,000-\$60,000."<sup>3</sup>

19      The cost of the larger UPS system is much lower than the cost of the generator; therefore,  
20      ORA concludes that CWS claim regarding higher cost is not a deciding factor.

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<sup>2</sup> CWS Project Justifications Report, July 2015, pg. DIX PJ-210, Line 55.

<sup>3</sup> Email from Veronica Chouinard of CWS to Daphne Goldberg of ORA (December 16, 2015, 1:35PM PT) (on file with author).

1 In response to Data Request DG-001, CWS explained that the current UPS unit was  
2 installed at the Dixon Customer Center in 2014 and there is no record that the unit has  
3 been used since its installation.

4 Although CWS considered the larger 25-KW UPS for the current request, it seems CWS  
5 did not consider the larger UPS system prior to purchasing the one they currently have.  
6 Furthermore, CWS explains that:

7 No known specific record of power outages have been maintained by Cal Water.  
8 The UPS was replaced in 2014 and logs documenting the duration and frequency  
9 of power outages are not available. Based on informal observation, Dixon district  
10 has noticed about 30-45 power outages in the past 5 years.<sup>4</sup>

11 CWS does not have logs documenting information on the number of power outages or the  
12 extent to which the UPS has been used since its installation in 2014. Therefore, there is  
13 no basis to conclude that the existing UPS is inadequate and needs to be replaced. Based  
14 on the lack of data about the current unit, ORA recommends that this project be rejected.

15 *b. Vehicle Replacements (PID: 99123)*

16 CWS requests \$88,505 in 2016 for the replacement of two vehicles (both heavy duty  
17 trucks). For reasons presented in ORA's Report on Plant – Common Issues, ORA  
18 recommends the requested V201001 replacement of \$41,521 be authorized for 2016 and  
19 requested V208016 replacement of \$46,984 be authorized for 2017 instead of 2016.

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<sup>4</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (January 21, 2016, 1:22PM PT) (on file with author).

*c. Small and Large Meter Replacement Program (PID: DIX0900)*

Table 2-D below lists CWS's requests and ORA's recommendation on the replacement budget of small and large meters in the Dixon District. ORA's recommended budgets are based on detailed analysis and recommendation in its Report on Plant – Common Issues.

**Table 2-D: Meter Replacement Budgets – Dixon District**

District:	Dixon		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 10,915	\$ 10,915
2017	0900	\$ 11,189	\$ 11,189
2018	0900	\$ 11,468	\$ 11,468

*d. Pipeline Replacement Program (PIDs: 99202, 99206, and 99207)*

CWS requests \$231,627 in 2016, \$237,417 in 2017, and \$243,333 in 2018 to replace 849 feet of pipeline per year. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each district, and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues Testimony (see ORA's Report on Plant – Common Issues). Table 2-E below shows ORA's recommendations for pipeline replacement and the associated budgets in this district.

**Table 2-E: Pipeline Replacement Requests – Dixon District**

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099202	523	\$ 88,192	849	\$ 231,627
2017	00099206	523	\$ 90,273	849	\$ 237,147
2018	00099207	523	\$ 92,332	849	\$ 243,333

*e. Replace SCADA Software and Hardware (PID: 99168)*

CWS requests \$294,518 in 2018 for the replacement of the SCADA system server and software program. For reasons presented in ORA's Report on Plant - Common Issues, ORA recommends disallowing this project.

## 2. Non-Specific Budgets for 2016 to 2018

CWS requests \$326,700 in the Non-Specific Budget to address unforeseen, unplanned, and emergency projects and regulatory complaint projects. ORA's Report on Plant – Common Issues presents ORA's recommended total disallowance of this budget.

## 3. 2015 Capital Budget

CWS requests \$353,700 for plant additions in 2015, which consist of projects authorized for 2015 in the last GRC and projects authorized from previous GRCs. ORA's Report on Plant - Common Issues presents its analysis and recommended 2015 capital additions for Dixon.

## 4. Advice Letter Projects

### *a. New Well – Station 4 (PID: 61955) and New Generator – Station 4 (PID 19807)*

In this GRC application, CWS includes previously approved advice letter projects in its workpapers:<sup>5</sup> a new well at Station 4 with a revised cost estimate of \$3,500,000 (original cost estimate of \$2,602,060), and a new generator at Station 4 with a cost estimate of \$146,667. CWS states that the generator project will be coordinated with the well project and will serve as a backup power source.<sup>6</sup> The new well project request was approved because according to CWS:

high levels of nitrates in the groundwater due to local agricultural practices continue to make it difficult to simultaneously operate

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<sup>5</sup> D.14-08-011, Settlement Agreement, pgs. 199-200, Lines 3-29; Lines 1-5.

<sup>6</sup> Ibid, pgs. 199, Lines 13-14.

1 other wells safely below the Maximum Contaminant Level of 45  
2 mg/L for nitrate and meet the demands of the district.<sup>7</sup>

3 CWS also explained that the “deep-aquifer well is expected to have lower nitrate  
4 concentrations than existing wells.”<sup>8</sup>

5 The project was originally scheduled to complete in 2012.<sup>9</sup> However, during the  
6 September 15, 2015, Dixon District Tour and in follow-up discovery, CWS explained  
7 that the project is primarily delayed due to driller availability and the well will now be  
8 drilled between “Jan-June 2016.”<sup>10</sup> The estimated project completion date is now March  
9 2017.<sup>11</sup>

10 Furthermore, CWS explains that:

11 The drilling bids were elevated because of high demand for drillers due to  
12 the drought and zone-specific sampling was added to the project scope to  
13 identify zones with lower concentrations of chromium and improved water  
14 quality.<sup>12</sup>

15 CWS includes these projects in the 2017 plant additions. However, due to both schedule  
16 and cost uncertainty, ORA recommends removing the projects from forecasted plant.  
17 Due to the uncertainty, ORA recommends the well project continue to be treated as an  
18 Advice Letter project and be capped at \$2.6 million. Correspondingly, ORA

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<sup>7</sup> Ibid, pgs. 199-200, Lines 28-29 and Lines 1-2.

<sup>8</sup> Ibid, pgs. 199, Lines 21-22.

<sup>9</sup> Report on the Results of Operation For The Dixon District of California Water Service Company, Attachment C, pg. 11.

<sup>10</sup> CWS Response to ORA Data Request DG-014, Q. 1.a. and 1.b.

<sup>11</sup> Ibid, Q. 1.a.

<sup>12</sup> Ibid, Q. 1.c.

1 recommends that the generator project be authorized as an Advice Letter project as well,  
2 and capped at \$146,667.

3 **D. CONCLUSION**

4 ORA's recommendations presented above have been incorporated in the calculations for  
5 estimated Plant in Service shown in Table 7-1 in its Company-wide Report, Appendix  
6 RO.

## Chapter 3: Plant – Livermore District

### A. INTRODUCTION

This chapter presents ORA’s analyses and recommendations for Plant in Service for CWS’s Livermore District.

### B. SUMMARY OF RECOMMENDATIONS

Based on ORA’s review and analysis of CWS’s requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA’s recommended capital budget summary presented in **Table 3-A** below. ORA’s estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding Pipeline Replacements, Meter Replacements, Pump Replacements, Overhaul of Control Valves, Panelboard Replacements, New Remote Terminal Units (RTUs), Generators, Vehicle Replacements, and Supervisory Control and Data Acquisition (SCADA) Upgrade. **Table 3-B** presents ORA project-specific adjustments.

1

**Table 3-A: Capital Budget Summary – Livermore District**

Livermore (\$000)	2015	2016	2017	2018	Annual Average
<b>ORA</b>	\$ 974.5	\$ 1,797.8	\$ 1,566.0	\$ 1,654.0	\$ 1,498.1
<b>CWS</b>	\$ 7,926.5	\$ 5,675.7	\$ 5,102.6	\$ 7,447.0	\$ 6,537.9
<b>CWS &gt; ORA</b>	\$ 6,951.9	\$ 3,877.8	\$ 3,536.6	\$ 5,793.0	\$ 5,039.8
<b>ORA as % of CWS</b>	12%	32%	31%	22%	23%

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**Table 3-B: Capital Budget Details – Livermore District**

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00065073	Vehicle - 0.5 Ton Pick Up and Outfitting	\$ -	\$ 41,650	\$ 41,650	0%
	00056572	Install 12" PRV at the corner of Siena Road and Bresso Drive, and install approximately 600 LF of new 8" PVC main to loop two existing 8" dead ends along Wetmore Road between Lagiss Drive and Talinga Drive.	\$ 178,643	\$ 251,509	\$ 72,866	71%
	00056573	Tank Mixing System - Sta. 30	\$ -	\$ 124,658	\$ 124,658	0%
	00056574	Replace existing 50,000 Gallon Redwood Tank with a bolted steel tank of same capacity - Sta. 10 Tank 1	\$ -	\$ 42,828	\$ 42,828	0%
	00056574	Replace existing 50,000 Gallon Redwood Tank with a bolted steel tank of same capacity - Sta. 10 Tank 1	\$ -	\$ 213,736	\$ 213,736	0%
	00056989	Replace two sample stations	\$ -	\$ 13,541	\$ 13,541	0%
	00063357	Replace Booster Pack - Sta. 32.	\$ -	\$ 42,634	\$ 42,634	0%
	00063860	Field - 3 Itron Meter Reading Units	\$ -	\$ 21,241	\$ 21,241	0%
	00064275	Replace Panelboard, Meter upgrade and Instrumentation - Sta. 16	\$ -	\$ 154,529	\$ 154,529	0%
	LIV0900	Meter Replacement Program	\$ -	\$ 122,639	\$ 122,639	0%
<b>Specifics Total</b>			<b>\$ 178,643</b>	<b>\$ 1,028,964</b>	<b>\$ 850,321</b>	<b>17%</b>
<b>Non-Specifics Total</b>			<b>\$ 156,297</b>	<b>\$ 903,250</b>	<b>\$ 746,953</b>	<b>17%</b>
<b>Carry-Overs Total</b>			<b>\$ 639,568</b>	<b>\$ 5,994,238</b>	<b>\$ 5,354,670</b>	<b>11%</b>
<b>TOTAL 2015</b>			<b>\$ 974,508</b>	<b>\$ 7,926,452</b>	<b>\$ 6,951,944</b>	<b>12%</b>

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2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097647	Upgrade cathodic protection system at Liver tanks : 23 - T1, 23-T2	\$ 46,416	\$ 46,416	\$ -	100%
	00097703	Install Chloramination system at Sta 12.	\$ -	\$ 5,378	\$ 5,378	0%
	00097703	Install Chloramination system at Sta 12.	\$ -	\$ 651,474	\$ 651,474	0%
	00097722	Change the horizontal splitcase boosters to Vertical Turbine boosters in order to eliminate the negative NPSHr problems at the station Sta. 18.	\$ 62,443	\$ 62,443	\$ -	100%
	00097722	Change the horizontal splitcase boosters to Vertical Turbine boosters in order to eliminate the negative NPSHr problems at the station Sta. 18.	\$ 353,042	\$ 353,042	\$ -	100%
	00097889	Replacement of pump and 30 Hp motor. Sta. 010-A	\$ 52,607	\$ 52,607	\$ -	100%
	00097892	Replacement of pump and 7.5 Hp motor. Sta. 029-A	\$ -	\$ 48,243	\$ 48,243	0%
	00097949	Replacement of pump and 7.5 Hp motor. Sta. 029-B	\$ -	\$ 48,243	\$ 48,243	0%
	00098023	Replace panelboard at Livermore Station 9	\$ -	\$ 960	\$ 960	0%
	00098023	Replace panelboard at Livermore Station 9	\$ -	\$ 267,095	\$ 267,095	0%
	00098136	Hydrant Meter Reduced Pressure Principal Assembly	\$ 37,861	\$ 37,861	\$ -	100%
	00098470	Retrofit overflow with airgap (both tanks). Sta. 018 T1 & T2 Tank 2 - Replace top section of exterior overflow pipe; Retrofit roof w/ drain; Replace upper 4 rungs of int. ladder.	\$ -	\$ 42,093	\$ 42,093	0%
	00098472	Retrofit overflow pipe with airgap on both tanks. Sta. 013-T1 & 019-T1 Extend safety climb rail on Sta. 019-T1.	\$ 23,997	\$ 23,997	\$ -	100%
	00098523	Overhaul of Control Valves in the Livermore District - 2016	\$ 4,213	\$ 74,542	\$ 70,329	6%
	00098599	Replacement of 3 control valves in Livermore.	\$ 87,799	\$ 87,799	\$ -	100%
	00098813	Install new RTU at station 8	\$ -	\$ 26,963	\$ 26,963	0%
	098846	Replace Obsolete Modicon RTUs with SCADAPacks	\$ -	\$ 70,687	\$ 70,687	0%
	00099150	Vehicle Replacements > 120,000 miles	\$ 41,521	\$ 41,521	\$ -	100%
	00099225	The 2016 main replacement program will replace 6,046 feet of pipelines in the Livermore district at an estimated cost of \$277 per foot.	\$ 960,572	\$ 2,496,767	\$ 1,536,195	38%
	LIV0900	Meter Replacement Program	\$ 127,370	\$ 148,925	\$ 21,555	86%
<b>Specifics Total</b>			<b>\$ 1,797,840</b>	<b>\$ 4,587,055</b>	<b>\$ 2,789,215</b>	<b>39%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 1,088,600</b>	<b>\$ 1,088,600</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2016</b>			<b>\$ 1,797,840</b>	<b>\$ 5,675,655</b>	<b>\$ 3,877,815</b>	<b>32%</b>

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097514	Livermore CP System Upgrade -2017 - Sta.13 Tank 2	\$ 19,137	\$ 19,137	\$ -	100%
	00097724	Install Mixing system in the tank at Sta 25	\$ 131,652	\$ 131,652	\$ -	100%
	00097951	Replacement of pump and 30Hp motor. Sta. 022-B	\$ 61,562	\$ 61,562	\$ -	100%
	00097952	Replacement of pump and 25Hp motor. Sta. 008-01	\$ 63,485	\$ 63,485	\$ -	100%
	00097953	Replacement of pump and 30 Hp motor. Sta. 022-A	\$ -	\$ 61,562	\$ 61,562	0%
	00098122	Replace the panelboard at Livermore Station 10	\$ -	\$ 984	\$ 984	0%
	00098122	Replace the panelboard at Livermore Station 10	\$ -	\$ 198,474	\$ 198,474	0%
	00098150	Install a generator at Livermore Station 23	\$ -	\$ 984	\$ 984	0%
	00098150	Install a generator at Livermore Station 23	\$ -	\$ 298,976	\$ 298,976	0%
	00098473	Retrofit overflow pipe with airgap. Sta 014-T1	\$ 17,900	\$ 17,900	\$ -	100%
	00098525	Overhaul of Control Valves in the Livermore District - 2017	\$ 4,312	\$ 76,405	\$ 72,093	6%
	00098600	Replacement of 3 control valves in Livermore.	\$ 89,994	\$ 89,994	\$ -	100%
	00098818	Install new RTU at station 16	\$ -	\$ 27,637	\$ 27,637	0%
	00098854	Replace Obsolete Modicon RTUs with SCADAPacks	\$ -	\$ 72,455	\$ 72,455	0%
	00098868	Install flow meter for Zone 7 Turnout #VI to CWS system	\$ 64,325	\$ 64,325	\$ -	100%
	00099153	Vehicle Replacements > 120,000 miles	\$ -	\$ 90,717	\$ 90,717	0%
	00099226	The 2017 main replacement program will replace 6,046 feet of pipelines in the Livermore district at an estimated cost of \$277 per foot.	\$ 983,242	\$ 2,559,186	\$ 1,575,944	38%
	LIV0900	Meter Replacement Program	\$ 130,376	\$ 152,647	\$ 22,271	85%
<b>Specifics Total</b>			<b>\$ 1,565,984</b>	<b>\$ 3,988,082</b>	<b>\$ 2,422,098</b>	<b>39%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 1,114,500</b>	<b>\$ 1,114,500</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2017</b>			<b>\$ 1,565,984</b>	<b>\$ 5,102,582</b>	<b>\$ 3,536,598</b>	<b>31%</b>

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2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097513	Livermore CP System Upgrade -2018 - Sta.18 Tank 2	\$ 19,615	\$ 19,615	\$ -	100%
	00097708	Drill & develop a new well as a replacement to Sta 8. Equip the well and Chloraminate the water for disinfection.	\$ -	\$ 81,891	\$ 81,891	0%
	00097708	Drill & develop a new well as a replacement to Sta 8. Equip the well and Chloraminate the water for disinfection.	\$ -	\$ 1,004,549	\$ 1,004,549	0%
	00097708	Drill & develop a new well as a replacement to Sta 8. Equip the well and Chloraminate the water for disinfection.	\$ -	\$ 442,037	\$ 442,037	0%
	00097708	Drill & develop a new well as a replacement to Sta 8. Equip the well and Chloraminate the water for disinfection.	\$ -	\$ 490,428	\$ 490,428	0%
	00098470	Retrofit overflow with airgap (both tanks). Sta. 018 T1 & T2 Tank 2 - Replace top section of exterior overflow pipe; Retrofit roof w/ drain; Replace upper 4 rungs of int. ladder.	\$ 42,093	\$ -	\$ (42,093)	0%
	00097725	Install mixing system at Sta 29	\$ 143,608	\$ 143,608	\$ -	100%
	00097954	Replacement of pump and 10HP motor. Sta. 026-A	\$ 55,270	\$ 55,270	\$ -	100%
	00097955	Replacement of pump and 30Hp motor. Sta. 010-B	\$ -	\$ 55,270	\$ 55,270	0%
	00097956	Replacement of pump and 60 Hp motor. Sta. 015-01	\$ -	\$ 65,072	\$ 65,072	0%
	00097957	Replacement of pump and 15 Hp motor. Sta. 028-A	\$ -	\$ 55,270	\$ 55,270	0%
	00098178	Replace the panelboard at Livermore Station 12	\$ -	\$ 1,008	\$ 1,008	0%
	00098178	Replace the panelboard at Livermore Station 12	\$ -	\$ 208,460	\$ 208,460	0%
	00098527	Overhaul of Control Valves in the Livermore District - 2018	\$ 4,411	\$ 78,316	\$ 73,905	6%
	00098601	Replacement of 3 control valves in Livermore.	\$ 92,243	\$ 92,243	\$ -	100%
	00098825	Install new RTU at station 12	\$ -	\$ 28,328	\$ 28,328	0%
	00098856	Replace Obsolete Modicon RTUs with SCADAPacks	\$ -	\$ 74,266	\$ 74,266	0%
	00098870	Install Flow Meter for Zone 7 Turnout # VII to CWS system	\$ 65,933	\$ 65,933	\$ -	100%
	00099153	Vehicle Replacements > 120,000 miles	\$ 48,159	\$ 48,159	\$ -	100%
	00099155	Vehicle Replacements > 120,000 miles	\$ 43,623	\$ 43,623	\$ -	100%
	00099171	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 522,381	\$ 522,381	0%
	00099227	The 2018 main replacement program will replace 6,046 feet of pipelines in the Livermore district at an estimated cost of \$277 per foot.	\$ 1,005,660	\$ 2,623,166	\$ 1,617,506	38%
	LIV0900	Meter Replacement Program	\$ 133,348	\$ 156,464	\$ 23,116	85%
<b>Specifics Total</b>			<b>\$ 1,653,962</b>	<b>\$ 6,307,197</b>	<b>\$ 4,653,235</b>	<b>26%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 1,139,800</b>	<b>\$ 1,139,800</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2018</b>			<b>\$ 1,653,962</b>	<b>\$ 7,446,997</b>	<b>\$ 5,793,035</b>	<b>22%</b>

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## C. DISCUSSION

The Livermore District recorded \$2,603,666 in annual average gross plant additions for the most recent six-year period 2009-2014.<sup>13</sup> **Table 3-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

**Table 3-C: Capital Budget Proposals vs. Recorded Expenditures– Livermore District**

Livermore (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 2,603.7	100%
ORA	\$ 974.5	\$ 1,797.8	\$ 1,566.0	\$ 1,654.0	\$ 1,498.1	58%
CWS	\$ 7,926.5	\$ 5,675.7	\$ 5,102.6	\$ 7,447.0	\$ 6,537.9	251%

ORA presents its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), advice letter projects (Section 2) Non-Specific projects (Section 3), and 2015 budget (Section 4) below.

### 4. Specific Projects

#### *a. Install Chloramination System at Station 12 (PID: 97703)*

CWS requests \$656,852 in 2016 to install a chloramination system at Station 12. CWS explains that Station 12 is currently not treated with chloramines, but should be in order to continue to ensure a safe and reliable water supply, while preventing water quality concerns.<sup>14</sup>

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<sup>13</sup> Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

<sup>14</sup> The details regarding the system's use of chloramines is designated confidential by the company. The information can be found in the CWS's Project Justifications Book, July 2015, pg. LIV PJ-211, Lines 44-53.

1 During the September 17, 2015 Livermore District Tour, CWS explained that the Station  
2 12 well pump had experienced sanding issues and had to be rehabilitated in 2013. The  
3 sand samples consisted of “small sand particles mixed with some fine silt, which is more  
4 difficult to control in a well.”<sup>15</sup> The rehabilitation took 11 months.<sup>16</sup> Furthermore, CWS  
5 explains that the well continued to experience sanding issues after the rehabilitation was  
6 completed. Although the well was returned to service, it only produced 500 gpm, down  
7 from the design capacity of 700 gpm; CWS explained that it lowered the well’s  
8 production to reduce sanding problems.<sup>17</sup> During the Livermore District Tour, ORA also  
9 learned that the pump again experienced sanding and has been taken offline for repair.  
10 CWS explained that the “chloramination project should not be on hold for longer than 6  
11 months.”<sup>18</sup> The repeated difficulties experienced by CWS in returning the well to full  
12 operating status casts serious doubt on the prudence of funding the chloramination  
13 project at this time. More importantly, CWS explained that while Station 12 is offline  
14 the system is able to meet Livermore demand through “customer demand reduction, the  
15 district’s remaining well supply, and purchased supply from Zone 7.”<sup>19</sup> At this time it is  
16 unknown when Station 12 will be operational again and what the well production will be.  
17 Although no adjustment has been made to remove the currently non-operational Station  
18 12 from rate base, ORA does not recommend the Commission authorize additional

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<sup>15</sup> CWS Response to ORA Data Request DG-018, Q. 1.a.i.

<sup>16</sup> Ibid, Q. 1.a.iii.

<sup>17</sup> Ibid, Q. 1.a.iv.

<sup>18</sup> Ibid, Q. 3.a.

<sup>19</sup> Ibid, Q. 1.v.

funding for a new project that, in order to be used and useful, would require Station 12 to be operational.

*b. Replacement of Pumps and Motors*

CWS requests \$566,584 for pump and motor replacement projects in budget years 2016 to 2018. ORA recommends \$232,924. The following **Table 3-D** shows CWS's requests, and ORA's recommendations for pump and motor replacements based on discussion in ORA's Report on Plant - Common Issues.

**Table 3-D: Pump Replacement Budgets – Livermore District**

Budget Year	PID	Station Number	CWS Requested Budget	Pump Rating	Pump Rating Year	ORA's Recommendation
2016	97889	10-A	\$52,607	Very Low	2012	\$52,607
2016	97892	29-A	\$48,243	Very Good	2014	\$0
2016	97949	29-B	\$48,243	Very Good	2014	\$0
2017	97952	08-01	\$63,485	Very Low	2014	\$63,485
2017	97953	22-A	\$61,562	Fair	2014	\$0
2017	97951	22-B	\$61,562	Low	2014	\$61,562
2018	97955	10-B	\$55,270	Fair	2012	\$0
2018	97956	15-01	\$65,072	Fair	2014	\$0
2018	97957	28-A	\$55,270	Very Good	2014	\$0
2018	97954	26-A	\$55,270	Very Low	2011	\$55,270
		<b>Total</b>	<b>\$566,584</b>		<b>Total</b>	<b>\$232,924</b>

*c. Replace panelboard at Station 9 (PID: 98023)*

CWS requests \$268,088 in 2016 to replace the existing panelboard at Station 9. CWS explains that the existing panelboard was installed in the mid-1950s and will require upgrades to ensure that the station remains reliable.<sup>20</sup> Furthermore, CWS explains that several of the components require replacement; however, replacement parts are not

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<sup>20</sup> CWS Project Justifications Report, July 2015, pg. LIV PJ-211, Lines 34-35.

1 available.<sup>21</sup> ORA inquired about the specification sheets for this panelboard; however, in  
2 response, CWS explained that the specification sheets are not available.<sup>22</sup> Without this  
3 information, ORA cannot verify information about the components or which of the  
4 components have been identified for replacement and the reason for the replacement.  
5 CWS also provided the panelboard inspection report in response to ORA's inquiry.<sup>23</sup> The  
6 inspection report did not indicate any corrective action required, nor did it recommend  
7 replacement of the panelboard. Because the replacement is not needed at this time, ORA  
8 recommends the Commission disallow this project.

9 *d. Station 18, Tank 1 and Tank 2 retrofit (PID: 98470)*

10 CWS requests \$42,093 in 2016 to retrofit the overflow with airgap for Tanks 1 and 2, to  
11 replace the top section of the exterior overflow pipe of Tank 2, to retrofit the roof with a  
12 drain and replace the upper four rungs of the interior ladder of Tank 2. CWS provided the  
13 October 2014 Tank 1 Inspection Report and the January 2014 Tank 2 Inspection Report  
14 which explain the work that is required. ORA agrees with the need of the project.  
15 However, because Tank 2 is scheduled for a cathodic protection upgrade in 2018 (PID  
16 97513), ORA recommends this project be completed in 2018 as well since the majority of  
17 the required retrofit work will be on Tank 2. Therefore, the tanks will only need to be  
18 taken offline once. This will prevent unnecessary interruption in supply storage.

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<sup>21</sup> Ibid, pg. LIV PJ-215, Lines 43-45.

<sup>22</sup> CWS Response to ORA Data Request DG-004, Q. 1.a.

<sup>23</sup> Ibid, Q. 1.b. Station 9 Panelboard Inspection Report.

1 *e. Install new RTU at Station 8 (PID: 98813)*

2 CWS requests \$26,963 in 2016 to install a new Remote Terminal Unit (RTU) at Station  
3 8. ORA presents its analysis and recommendation in its Report on Plant - Common  
4 Issues. Consistent with that analysis, ORA recommends the Commission disallow this  
5 project.

6 *f. Replace Obsolete Modicon RTUs with SCADA Packs (PID: 98846)*

7 CWS requests \$70,687 in 2016 to replace obsolete Modicon RTUs with SCADA Packs.  
8 ORA presents its analysis and recommendation in its Report on Plant - Common  
9 Issues. Consistent with that analysis, ORA recommends the Commission disallow this  
10 project.

11 *g. Replace panelboard at Station 10 (PID: 98122)*

12 CWS requests \$199,458 in 2017 to replace the existing panelboard at Station 10. CWS  
13 explains that the existing panelboard was installed in the mid-1950s and will require  
14 upgrades to ensure that the station remains reliable.<sup>24</sup> Furthermore, CWS explains that  
15 several of the components require replacement; however, replacement parts are not  
16 available.<sup>25</sup> ORA inquired about the specification sheets for this panelboard; however, in  
17 response, CWS explained that the specification sheets are not available.<sup>26</sup> Without this  
18 information, ORA cannot verify information about the components or which of the  
19 components have been identified for replacement and the reason for the replacement.

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<sup>24</sup> CWS Project Justifications Report, July 2015, pg. LIV PJ-215, Lines 33-34.

<sup>25</sup> Ibid, pg. LIV PJ-215, Lines 43-45.

<sup>26</sup> CWS Response to ORA Data Request DG-004, Q. 1.a.

1 CWS also provided the panelboard inspection report in response to ORA’s inquiry.<sup>27</sup> The  
2 inspection report did not indicate any corrective action required, nor did it recommend  
3 replacement of the panelboard. To avoid unnecessary ratepayer funding of projects that  
4 appear to be unneeded at this time, ORA recommends the Commission disallow this  
5 project.

6 *h. Install a generator at Station 23 (PID: 98150)*

7 CWS requests \$299,960 in 2017 to install a generator at Station 23. Station 23 includes  
8 two 2.5 MGD storage tanks and 5 booster pumps. CWS explains that the “existing drive  
9 engine which powers only one pump will be replaced by a diesel generator with a sub-  
10 base fuel tank.”<sup>28</sup> The “existing engine is approximately 40 years old.”<sup>29</sup> The engine  
11 components are failing.”<sup>30</sup> Furthermore, CWS states that the existing engine “will be  
12 replaced by a generator that will supply power to all the booster pumps.”<sup>31</sup>

13 ORA inquired about the number of times the existing engine was used between 2005 and  
14 2014. In response to ORA’s inquiry, CWS submitted only a 2014 Engine Run Report  
15 which shows that the existing generator was never used for emergency purposes in that  
16 year. It was only used for a total of 20 minutes for a test run in 2014. Since CWS only  
17 provided 2014 usage data and no other historical data on the previous years, ORA cannot  
18 confirm that the generator is needed at this Station, and therefore recommends that the  
19 Commission disallow this project.

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<sup>27</sup> Ibid, Q. 1.b. Station 10 Panelboard Inspection Report.

<sup>28</sup> CWS Project Justifications Report, July 2015, pg. LIV PJ-259, Lines 12-13.

<sup>29</sup> Ibid, pg. LIV PJ-259, Line 26.

<sup>30</sup> Ibid, pg. LIV PJ-259, Line 26.

<sup>31</sup> Ibid, pg. LIV PJ-259, Lines 28-29.

1                   *i. Install new RTU at Station 16 (PID: 98813)*

2       CWS requests \$27,637 in 2017 to install a new RTU at Station 16. ORA presents its  
3       analysis and recommendation in its Report on Plant - Common Issues. Consistent with  
4       that analysis, ORA recommends the Commission disallow this project.

5                   *j. Vehicle Replacements (PID: 99153)*

6       CWS requests \$90,717 in 2017 to replace two vehicles (both heavy duty). For reasons  
7       provided in ORA's Report on Plant - Common Issues, ORA recommends the  
8       Commission disallow these replacements.

9                   *k. Replace Obsolete Modicon RTUs with SCADA Packs (PID: 98854)*

10      CWS requests \$72,455 in 2017 to replace obsolete Modicon RTUs with SCADA Packs.  
11      ORA presents its analysis and recommendation in its ORA's Report on Plant - Common  
12      Issues. Consistent with that analysis, ORA recommends the Commission disallow this  
13      project.

14                  *l. Vehicle Replacement (PID: 99155)*

15      CWS requests \$43,623 in 2018 to replace a vehicle (heavy duty). For reasons provided  
16      in ORA's Report on Plant - Common Issues, ORA recommends the Commission  
17      disallow this vehicle replacement.

18                  *m. Drill and develop new well (PID: 97708)*

19      CWS requests \$2,018,905 in 2018 to design, drill, develop and equip a new 600-foot to  
20      800-foot deep well with an anticipated production of 600 gpm<sup>32</sup> to serve the 610 pressure

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<sup>32</sup> Ibid, pg. LIV PJ-242, Lines 16-17.

1 zone. CWS indicates that “the 610 pressure zone comprises approximately 34% of the  
2 total district usage.”<sup>33</sup>

3 CWS previously requested this project in the 2012 GRC (PID: 56749). However, ORA  
4 and CWS agreed in settlement that “Cal Water should not pursue Project 56749 until a  
5 groundwater quality study has been conducted in the 610 Zone and there is a need to  
6 construct the well.”<sup>34</sup>

7 In response to ORA’s inquiry, CWS explained that “Groundwater Partners has been hired  
8 for a well siting study. A technical memorandum of findings and recommendations will  
9 be provided in the Fall of 2015.”<sup>35</sup> Furthermore, CWS has not yet purchased land for  
10 construction of this well. CWS has only identified potential well locations but does not  
11 yet know if the locations are suitable for well construction.<sup>36</sup> CWS is violating the terms  
12 of the settlement by again proposing the project in this GRC without first having  
13 conducted the groundwater quality study. It is important to note that the 2009 CWS GRC  
14 Decision<sup>37</sup> authorized budget for land purchase (PID 58212) and construction of a new  
15 well in the 610 Zone (PID 21344). However, CWS abandoned the project after initial

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<sup>33</sup> Ibid, pg. LIV PJ-243, Line 47.

<sup>34</sup> D.14-08-011; CWS and ORA Settlement Agreement, pg. 267, Lines 11-13.

<sup>35</sup> CWS Response to ORA Data Request DG-010, Q. 5.a.

<sup>36</sup> Ibid, Q. 5.b.

<sup>37</sup> D. 10-12-017.

tests showed that the water quality and quantity would not support further investment.<sup>38</sup>  
CWS spent a total of \$593,494 on the abandoned well project.<sup>39</sup>

*i. Customer Demand*

In its justification, CWS explains that during a time when Zone 7 water is not available, CWS would not be able to meet the Maximum Day Demand (MDD) and Peak Hour Demand (PHD) in Zone 610. ORA inquired and CWS provided the 610 pressure zone MDD, PHD, and ADD data from the past 10 years. The MDD data is in the **Table 3-E** below<sup>40</sup>:

**Table 3-E: Zone 610 MDD- Livermore District**

Livermore Zone 610	
Year	MDD (gpm)
2005	4,715
2006	4,398
2007	4,820
2008	4,485
2009	4,503
2010	4,126
2011	4,596
2012	4,454
2013	4,857
2014	3,141

Between the years 2005 and 2014, the MDD in the Zone has been fluctuating; however, a substantial decrease of approximately 35% occurred between 2013 and 2014. ORA

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<sup>38</sup> D.10-12-017, CWS and ORA Settlement Agreement, pg. 267, Lines 17-19 and pg. 268, Lines 1-2.

<sup>39</sup> Ibid, pg. 268, Lines 5.

<sup>40</sup> CWS Response to ORA Data Request DG-015, Attachment to Q. 5.a.

1 expects this decrease to continue in 2015 given the current drought restrictions in place  
2 and their extension to October 2016 in California.<sup>41</sup>

3 *ii. Sources of Supply*

4 CWS stated that Zone 610 is supplied with four Zone 7 Turnouts, specifically Turnouts  
5 IV, VI, IX, and X.<sup>42</sup> From the 2007 Livermore Water Supply and Facilities Master Plan,

6 \*\*\*BEGIN CONFIDENTIAL\*\*\* [REDACTED]  
7 [REDACTED]<sup>43</sup> [REDACTED]  
8 [REDACTED],<sup>44,45</sup>

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<sup>41</sup> [http://www.swrcb.ca.gov/press\\_room/press\\_releases/2016/pr2316\\_reg\\_extension.pdf](http://www.swrcb.ca.gov/press_room/press_releases/2016/pr2316_reg_extension.pdf)

<sup>42</sup> CWS Project Justification Report, page LIV PJ-243, lines 45-46.

<sup>43</sup> CWS Water Supply and Facilities Master Plan, Livermore District, 2007, pg. 2-20, Table 2-13.

<sup>44</sup> CWS Response to ORA Data Request DG-015, Q. 5.b. Attachment.

<sup>45</sup> CWS Water Supply and Facilities Master Plan, Livermore District, 2007, pg. 2-10, Table 2-7.

1      **Table 3-F: Water Supply to Livermore Pressure Zone 610 CONFIDENTIAL**

Livermore Pressure Zone 610	
Source of Supply	Rated Capacity or Well Production (gpm)

2

3      **\*\*\* END CONFIDENTIAL\*\*\*** The Zone 7 supply data in the table is from the 2007  
4      Livermore Water Supply and Facilities Master Plan. CWS did not provide updated Zone  
5      7 supply data for the Pressure Zone 610, so ORA does not know if there have been any  
6      increases or decreases since then. The Station 15, 20 and 23 supply data was provided in  
7      response to ORA's Data Request DG-015. CWS neglected to include the supply of  
8      Stations 15, 20, and 23 in the Project Justification for the new well request.<sup>46</sup> Assuming  
9      the current supply capacity from Zone 7 is the same as shown in the CWS's Master Plan,  
10     the total supply available in Zone 610 at **\*\*\* BEGIN CONFIDENTIAL\*\*\***  
11     **\*\*\* END CONFIDENTIAL\*\*\*** times the 2014 MDD and the  
12     highest MDD in 2005-2014, respectively.

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<sup>46</sup> CWS Project Justifications Report, July 2015, pg. LIV PJ-243.

1 Upon inquiry, CWS provided 2010-2014 Zone 7 production data which shows a 38%  
2 reduction in supply between 2013 and 2014.<sup>47</sup> Even with this reduction, there still exists  
3 \*\*\*BEGIN CONFIDENTIAL\*\*\* [REDACTED]  
4 [REDACTED] \*\*END CONFIDENTIAL\*\*\*<sup>48</sup> from purchased water and Stations  
5 15, 20 and 23, respectively. That capacity exceeds both the 2014 MDD, and the highest  
6 MD in 2005-2014.

7 *iii. Zone 7 Supply Reliability*

8 Although CWS claims that the Zone 7 supply is unreliable, the information that CWS  
9 provided did not support this claim. CWS has to purchase a certain amount of water  
10 from Zone 7 and cannot reduce that amount. In response to ORA's Data Request DG-  
11 016, CWS explains that:

12 Zone 7 and Cal Water have entered into a thirty-year contract for a municipal and  
13 industrial water supply. The current contract entered into on November 16, 1994  
14 is the second contract of its nature with Zone 7. The contract sets forth the terms  
15 and conditions that govern the delivery and use of both purchased water and  
16 groundwater. Cal Water agreed to purchase imported water from Zone 7 in order  
17 to meet all remaining demand in its Livermore District. In return, Zone 7 agrees  
18 to maintain an adequate water supply to meet Cal Water's demands. The purchase  
19 agreement between Cal Water and Zone 7 is provided as a reference in Appendix  
20 I.<sup>49</sup>

21 Furthermore, in response to ORA's Data Request DG-010 regarding the need for a new  
22 well, CWS explains that:

23 In a normal year, the reduction in purchased supply from Zone 7 would

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<sup>47</sup> CWS Response to ORA Data Request DG-004, Attachment to Question 4a.

<sup>48</sup> \*\*\*BEGIN CONFIDENTIAL\*\*\* [REDACTED]  
[REDACTED] \*\*END CONFIDENTIAL\*\*\*

<sup>49</sup> CWS 2010 Urban Water Management Plan, Livermore District, Appendix I.

1 be zero as we have an annual pumping limit of 1,000 MG (or 1,902 gpm) or  
2 3,068.89 AF per year. Last year's annual production was approximately 2,694  
3 MG. The well could be used in the summer months to reduce our dependency on  
4 Zone 7 supply during the summer but would not reduce annual purchases from  
5 the Zone.<sup>50</sup>

6 Also in response to ORA's inquiry, CWS explains that there would be no Zone 7  
7 purchased water cost savings after the new well is drilled because "the well is not being  
8 considered as an alternative to Zone 7 [purchased]water."<sup>51</sup>

9 Zone 7 is the water wholesaler to the four water retailers in the Tri-Valley area; the  
10 retailers are Livermore Municipal Water, CWS-Livermore, Dublin San Ramon Services  
11 District, and City of Pleasanton. These water retailers make up the Tri-Valley Water  
12 Retailers Group. In a letter dated July 10, 2012 from the Tri-Valley Water Retailers  
13 Group to the Zone 7 Water Agency, the Group, agreed that an appropriate reliability  
14 level is between 80% and 90% in a March 2012 Reliability Policy Workshop.<sup>52</sup> An 80%  
15 supply reliability would be equal to 7,440 gpm (0.8 x 9,300 gpm). Even if the capacity is  
16 discounted by 20% to adjust for reliability, CWS would still be able to meet the Zone 610  
17 demand with this supply.

18 CWS provided examples of supply outages between 2009 and 2012, most of which were  
19 planned outages for infrastructure maintenance.<sup>53</sup> However, CWS also provided a letter  
20 dated July 20, 2012 from the Department of Water Resources to the President of the Zone  
21 7 Board of Directors and the Alameda County Flood Control and Water Conservation  
22 District. The letter states that "[i]mproving communication, coordination and

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<sup>50</sup> CWS Response to ORA Data Request DG-010, Q. 5.e.

<sup>51</sup> Ibid, Q. 5.f.

<sup>52</sup> CWS Project Justifications Report, July 2015, pg. LIV PJ-247.

<sup>53</sup> Ibid, pgs. LIV PJ-246, 249, 251 and 255-257.

1 contingency planning, as discussed above, will enable potential similar situations to be  
2 addressed more effectively in the future.”<sup>54</sup>

3 Since CWS did not submit any correspondence citing supply outages after 2012, ORA  
4 concludes that as a follow-up to the letter referenced above, the Department of Water  
5 Resources is working together with Zone 7 and the Alameda County Flood Control and  
6 Water Conservation District to prevent additional outages.

7 ORA recommends the Commission disallow this project request because 1) CWS has not  
8 yet provided ORA with the recommendations from the groundwater study, 2) Zone 610  
9 has excess supply capacity and does not require a new well.

10 *n. Replace panelboard at Station 12 (PID: 98178)*

11 CWS requests \$209,468 in 2018 to replace the existing panelboard at Station 12. CWS  
12 states that the existing panelboard was installed in the mid-1950s and will require  
13 upgrades to ensure that the station remains reliable.<sup>55</sup> Furthermore, CWS explains that  
14 several of the components require replacement; however, replacement parts are not  
15 available.<sup>56</sup> ORA inquired about the specification sheets for this panelboard; however, in  
16 response, CWS explained that the specification sheets are not available.<sup>57</sup> Without this  
17 information, ORA cannot verify information about the components or which of the  
18 components have been identified for replacement and the reason for the replacement.  
19 CWS also provided the panelboard inspection report in response to ORA’s inquiry.<sup>58</sup> The

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<sup>54</sup> Ibid, pg. LIV PJ-252.

<sup>55</sup> Ibid, pg. LIV PJ-215, Lines 30-31.

<sup>56</sup> Ibid, pg. LIV PJ-219, Lines 40-42.

<sup>57</sup> CWS Response to ORA Data Request DG-004, Q. 1.a.

<sup>58</sup> Ibid, Q. 1.b. Station 12 Panelboard Inspection Report.

1 inspection report did not indicate any corrective action required, nor did it recommend  
2 replacement of the panelboard. To avoid unnecessary ratepayer funding of projects that  
3 appear to be unneeded at this time, ORA recommends the Commission disallow this  
4 project.

5 *o. Install new RTU at Station 12 (PID: 98825)*

6 CWS requests \$28,328 in 2018 to install a new RTU at Station 12. ORA presents its  
7 analysis and recommendation in its Report on Plant - Common Issues. Consistent with  
8 that analysis, ORA recommends the Commission disallow this project.

9 *p. Replace Obsolete Modicon RTUs with SCADA Packs (PID: 98856)*

10 CWS requests \$74,266 in 2018 to replace obsolete Modicon RTUs with SCADA Packs.  
11 ORA presents its analysis and recommendation in its Report on Plant - Common  
12 Issues. Consistent with that analysis, ORA recommends the Commission disallow this  
13 project.

14 *q. Overhaul of Control Valves (PIDs: 98523, 98525, and 98527)*

15 CWS requests \$74,542 in 2016, \$76,405 in 2017, and \$78,316 in 2018 to overhaul some  
16 of the control valves in the District. **Table 3-G** below lists CWS's requests and ORA's  
17 recommendation on this project. ORA provides a discussion of its recommendation in  
18 ORA's Report on Plant - Common Issues.

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**Table 3-G: Overhaul of Control Valves – Livermore District**

District	Livermore		
Year	PID	ORA's Recommendation	CWS's Proposal
2016	98523	\$4,213	\$74,542
2017	98525	\$4,312	\$76,405
2018	98527	\$4,411	\$78,316

*r. Pipeline Replacement Program (PIDs: 99225, 99226, 99227)*

CWS requests \$2,496,767 in 2016, \$2,559,186 in 2017, \$ 2,623,166 in 2018 for its main replacement program. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in its Common Plant Issues Testimony (see ORA's Report on Plant – Common Issues). **Table 3-H** below lists ORA's recommendations for pipeline replacement and the associated budget for this district.

**Table 3-H: Pipeline Replacement Program Budget – Livermore District**

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099225	5,031	\$ 960,572	6,046	\$ 2,496,767
2017	00099226	5,031	\$ 983,242	6,046	\$ 2,559,186
2018	00099227	5,031	\$ 1,005,660	6,046	\$ 2,623,166

*s. Small and Large Meter Replacement Program (PID: LIV0900)*

**Table 3-I** below lists CWS's requests and ORA's recommendation on the replacement budget of small and large meters in the Livermore District. ORA's recommended budgets are based on detailed analysis and recommendation in its Report on Plant - Common Issues.

**Table 3 -I: Meter Replacement Budgets – Livermore District**

District:	Livermore		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 127,370	\$ 148,925
2017	0900	\$ 130,376	\$ 152,647
2018	0900	\$ 133,348	\$ 156,464

*t. Replace SCADA Software and Hardware (PID: 99171)*

CWS requests \$522,381 in 2018 for the replacement of the SCADA system server and software program. For reasons identified in ORA’s Common Plant Issues testimony on SCADA, ORA recommends the Commission disallow this project.

**5. Advice Letter Project: CWS Risk Analysis and Management for Critical Asset Protection (RAMCAP) Vulnerability Assessment (PID 79953)**

CWS included the Cal Water RAMCAP Vulnerability Assessment Project Advice Letter in this GRC Workpapers. CWS originally requested this project for all districts in the 2012 General Rate Case (A.12-07-007). According to CWS, RAMCAP is an “all-hazards” approach to risk and resilience management for critical infrastructure. CWS anticipates that, in the near future, the federal government will require water and wastewater utilities to perform vulnerability assessments using this approach. ORA recommended disallowing the project because it was uncertain if the federal government would require water utilities to perform this type of study and also due to CWS’s cost estimate inconsistencies.<sup>59</sup> In the adopted 2012 General Rate Case Settlement Agreement, ORA and CWS agreed to “conditional advice letter treatment for all

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<sup>59</sup> D.14-08-011, Exhibit A, Settlement Agreement, pg. 103, Lines 22-25.

1 RAMCAP projects, which are listed below with corresponding advice letter cap amounts.  
2 Parties agree that Cal Water should not implement these projects unless required by the  
3 federal government to perform RAMCAP vulnerability studies according to the AWWA  
4 J100 guidelines...”<sup>60</sup> The cap amount for Livermore is \$105,713. In this GRC, CWS  
5 provides the following explanation:

6 The RAMCAP projects are triggered advice letters and will only be completed by  
7 Cal Water if the Federal Government requires enhanced vulnerability studies in  
8 accordance with the AWWA J100 guidelines. Since this has not triggered, Cal  
9 Water has not opened these projects for charges, but Cal Water retains authority  
10 from the Commission to complete if required until January 1, 2017.<sup>61</sup>

11 CWS’s workpapers states that “Project is on standby awaiting legislation.”<sup>62</sup> CWS did  
12 not submit testimony or any additional information on this project in this GRC. Since  
13 there continues to be uncertainty regarding the project’s need and timeline, ORA  
14 recommends removing Advice Letter authorization for this project. CWS can propose  
15 this project in a future GRC, when more information is known.

## 16 **6. Non-Specific Budgets for 2016 to 2018**

17 CWS requests \$1,088,600 in 2016, \$1,114,500 in 2017, and \$1,139,800 in 2018 in the  
18 Non-Specific Budget to address unforeseen, unplanned, and emergency projects and  
19 regulatory compliant projects. ORA’s Report on Plant - Common Issues presents its  
20 recommended total disallowance of this budget.

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<sup>60</sup> Ibid, pg. 103, Lines 26-30.

<sup>61</sup> Report on the Results of Operation for the Livermore District of CWS, July 2015, pg. 33.

<sup>62</sup> CWS Livermore October 2015, Workpaper WP8B9a.

1        **7. 2015 Capital Budget**

2        CWS requests \$7,926,452 for plant additions in 2015, which consist of projects  
3        authorized for 2015 in the last GRC and projects authorized from previous  
4        GRCs. ORA's Report on Plant - Common Issues presents its analysis and basis for  
5        adjusting 2015 capital additions for Livermore.

6        **D. CONCLUSION**

7        ORA's recommendations presented above have been incorporated in the calculations for  
8        estimated Plant in Service shown in Table 7-1 in its Company- wide Report, Appendix  
9        RO.

10

## Chapter 4: Plant – Los Altos District

### A. INTRODUCTION

This chapter presents ORA's analyses and recommendations for Plant in Service for CWS's Los Altos District.

### B. SUMMARY OF RECOMMENDATIONS

Based on ORA's review and analysis of CWS's requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA's recommended capital budget summary presented in **Table 4-A** below. ORA's estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding Pipeline Replacements, Meter Replacements, Vehicle Replacements, Flow Meters, Security Upgrades, and SCADA Replacement. **Table 4-B** presents ORA project-specific adjustments.

**Table 4-A: Capital Budget Summary – Los Altos District**

Los Altos (\$000)	2015	2016	2017	2018	Annual Average
<b>ORA</b>	\$ 1,990.1	\$ 3,347.4	\$ 3,229.5	\$ 3,532.1	\$ 3,024.8
<b>CWS</b>	\$ 5,769.8	\$ 4,904.0	\$ 5,260.1	\$ 7,408.2	\$ 5,835.5
<b>CWS &gt; ORA</b>	\$ 3,779.7	\$ 1,556.6	\$ 2,030.6	\$ 3,876.1	\$ 2,810.7
<b>ORA as % of CWS</b>	34%	68%	61%	48%	52%

1

**Table 4-B: Capital Budget Details – Los Altos District**

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00015631	Grant Road - Sleeper Rd. to Martins - 2,450' 8" PVC; 2 1" Services	\$ -	\$ 719,820	\$ 719,820	0%
	00015631	Grant Road - Sleeper Rd. to Martins - 2,450' 8" PVC; 2 1" Services	\$ -	\$ 7,766	\$ 7,766	0%
	00025649	Paint Complete Exterior - Sta. 121 T1, T2 & T3 Paint Interior Roof & Upper 2' shell - Sta. 121 Tank 1	\$ -	\$ -	\$ -	0%
	00058334	Chloramination System - Sta. 121	\$ -	\$ 368,005	\$ 368,005	0%
	00062672	Replace Pump and Motor - Sta. 30-A	\$ -	\$ 4,200	\$ 4,200	0%
	00062672	Replace Pump and Motor - Sta. 30-A	\$ -	\$ 57,288	\$ 57,288	0%
	00063056	Replace Pump & Motor - Sta. 113-A	\$ -	\$ 31,476	\$ 31,476	0%
	00066250	Replace Panelboard - Sta. 11	\$ -	\$ 142,107	\$ 142,107	0%
	00073093	Paint interior floor & 21' lower shell, exterior roof, and upgrade CP system to auto potential - Sta. 42 T2	\$ 36,978	\$ 34,570	\$ (2,408)	107%
	LAS0900	Meter Replacement Program	\$ -	\$ 123,083	\$ 123,083	0%
<b>Specifics Total</b>			\$ 36,978	\$ 1,488,316	\$ 1,451,337	2%
<b>Non-Specifics Total</b>			\$ 393,960	\$ 1,052,100	\$ 658,140	37%
<b>Carry-Overs Total</b>			\$ 1,559,124	\$ 3,229,343	\$ 1,670,218	48%
<b>TOTAL 2015</b>			\$ 1,990,063	\$ 5,769,758	\$ 3,779,696	34%

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2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097656	Upgrade cathodic protection system at Los Altos tanks: 42 -T1, 42-T2, 42-T3, 111-T1 and 114-T1	\$ 98,625	\$ 98,625	\$ -	100%
	00097788	Replacement of pump and motor. Sta. 010-B	\$ 52,607	\$ 52,607	\$ -	100%
	00097789	Replacement of pump and motor. Sta. 114-D	\$ 52,607	\$ 52,607	\$ -	100%
	00097868	Purchase and Install AMR system in LAS	\$ -	\$ 301,165	\$ 301,165	0%
	00097868	Purchase and Install AMR system in LAS	\$ -	\$ 20,394	\$ 20,394	0%
	00097984	Replace wood roof. Replace overflow weir & inlet pipe Sta. 017-T1	\$ 31,587	\$ 31,587	\$ -	100%
	00098130	Hydrant Meter Reduced Pressure Principal Assembly	\$ 15,489	\$ 15,489	\$ -	100%
	00098425	Tank 1: Replace asphalt berm; Install new overflow; Replace (21) rafter ends Tank 2: Replace asphalt berm Sta.119	\$ 85,551	\$ 85,551	\$ -	100%
	00098469	Overhaul of Control Valves in the Los Altos District - 2016	\$ 26,835	\$ 26,835	\$ -	100%
	00098508	Purchasing IPAD's for SCADA	\$ 1,442	\$ 1,442	\$ 0	100%
	00098765	Install flow meter at stations 7,10,19,104,38	\$ -	\$ 230,175	\$ 230,175	0%
	00099157	Vehicle Replacements > 120,000 miles	\$ 83,042	\$ 137,674	\$ 54,632	60%
	00101681	Tenant improvements of the Los Altos Suburban Commercial Office space to maximize use of space, increase security, and accomodate additional staff and/or potential complement increase.	\$ -	\$ 235,908	\$ 235,908	0%
	00101681	Tenant improvements of the Los Altos Suburban Commercial Office space to maximize use of space, increase security, and accomodate additional staff and/or potential complement increase.	\$ -	\$ 78,671	\$ 78,671	0%
	00099221	The 2016 main replacement program will replace 10,023 feet of pipelines in the Los Altos Suburban district at an estimated cost of \$189 per foot.	\$ 1,363,484	\$ 2,824,162	\$ 1,460,678	48%
	LAS0900	Meter Replacement Program	\$ 116,514	\$ 207,951	\$ 91,437	56%
<b>Specifics Total</b>			\$ 1,927,782	\$ 3,484,367	\$ 1,556,585	55%
<b>Non-Specifics Total</b>			\$ 1,419,600	\$ 1,419,600	\$ -	100%
<b>Carry-Overs Total</b>					\$ -	0%
<b>TOTAL 2016</b>			\$ 3,347,382	\$ 4,903,967	\$ 1,556,585	68%

3

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097649	Upgrade cathodic protection system at Los Altos tanks: 119 -T1, 121-T1, 121-T2, 121-T3, and 123-T1	\$ 95,684	\$ 95,684	\$ -	100%
	00097700	Replace existing pressure tank.	\$ -	\$ 35,463	\$ 35,463	0%
	00097700	Replace existing pressure tank.	\$ -	\$ 112,210	\$ 112,210	0%
	00097790	Replacement of pump and motor. Sta. 007-D	\$ 68,769	\$ 68,769	\$ -	100%
	00097865	Replace panelboard at Los Altos Station 9	\$ -	\$ 972	\$ 972	0%
	00097865	Replace panelboard at Los Altos Station 9	\$ -	\$ 193,978	\$ 193,978	0%
	00098483	Add panel board overhangs at Stations 24, 27, 28, 30, 31 and 32.	\$ 8,779	\$ 16,400	\$ 7,621	54%
	00098494	Add cameras, motion detectors and alarms at Station 17.	\$ -	\$ 52,789	\$ 52,789	0%
	00098501	Add cameras, motion detectors and alarms at Station 20.	\$ -	\$ 52,789	\$ 52,789	0%
	00098515	Overhaul of Control Valves in the Los Altos District - 2017	\$ 27,506	\$ 27,506	\$ -	100%
	00099158	Vehicle Replacements > 120,000 miles	\$ -	\$ 42,559	\$ 42,559	0%
	00099157	Vehicle Replacements > 120,000 miles	\$ 54,632	\$ -	\$ (54,632)	0%
	00099223	The 2017 main replacement program will replace 10,023 feet of pipelines in the Los Altos Suburban district at an estimated cost of \$189 per foot.	\$ 1,401,804	\$ 2,894,766	\$ 1,492,962	48%
	LAS0900	Meter Replacement Program	\$ 119,263	\$ 213,150	\$ 93,887	56%
<b>Specifics Total</b>			<b>\$ 1,776,437</b>	<b>\$ 3,807,035</b>	<b>\$ 2,030,598</b>	<b>47%</b>
<b>Non-Specifics Total</b>			<b>\$ 1,453,100</b>	<b>\$ 1,453,100</b>	<b>\$ -</b>	<b>100%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2017</b>			<b>\$ 3,229,537</b>	<b>\$ 5,260,135</b>	<b>\$ 2,030,598</b>	<b>61%</b>

1

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097648	Upgrade cathodic protection system at Los Altos tanks: 2-T1, 9-T1, 104-T1, 119-T2, 33-T1 and 33-T2	\$ 117,691	\$ 117,691	\$ -	100%
	00097813	Replacement of pump and motor. Sta. 017-A	\$ 70,488	\$ 70,488	\$ -	100%
	00097814	Replacement of pump and motor. Sta. 033-B	\$ 70,488	\$ 70,488	\$ -	100%
	00097987	Panelboard needs to be replaced at Los Altos Station 19	\$ -	\$ 996	\$ 996	0%
	00097987	Panelboard needs to be replaced at Los Altos Station 19	\$ -	\$ 198,827	\$ 198,827	0%
	00097989	Install new 30" manway; Replace roof hatch w/ 30" x 30" hatch; Replace upper 6' of interior ladder. Sta. 114-T1	\$ 22,791	\$ 22,791	\$ -	100%
	00098010	Panelboard needs to be replaced at Los Altos Station 27	\$ -	\$ 996	\$ 996	0%
	00098010	Panelboard needs to be replaced at Los Altos Station 27	\$ -	\$ 276,567	\$ 276,567	0%
	00098402	A Water Supply and Facility Master Plan will be prepared by a consultant.	\$ 140,045	\$ 469,018	\$ 328,973	30%
	00098503	Installing cameras, motion detectors and alarms at Station 31.	\$ -	\$ 46,278	\$ 46,278	0%
	00098511	Replace portable booster connection with company standard hydrants.	\$ 24,246	\$ 24,246	\$ -	100%
	00098513	Old copier is out dated and in bad condition	\$ -	\$ 14,522	\$ 14,522	0%
	00098518	Install overhangs on panelboards to help protect charts from weather.	\$ 6,386	\$ 14,168	\$ 7,782	45%
	00098519	Overhaul of Control Valves in the Los Altos District - 2018	\$ 28,194	\$ 28,194	\$ -	100%
	00098543	Replace upper 4 rungs of interior ladder. Install new interior safety climb rail. Sta. 007-T1	\$ 9,870	\$ 9,870	\$ -	100%
	00099098	Station 35 overhaul-Station 35 needs work done. Panelboard, Booster (Pump & Motor), Pump Control Valve, Plumbing Valves, Wharf head.	\$ -	\$ 167,701	\$ 167,701	0%
	00099098	Station 35 overhaul-Station 35 needs work done. Panelboard, Booster (Pump & Motor), Pump Control Valve, Plumbing Valves, Wharf head.	\$ -	\$ 404,720	\$ 404,720	0%
	00099159	Vehicle Replacements > 120,000 miles	\$ -	\$ 148,088	\$ 148,088	0%
	00099172	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 574,709	\$ 574,709	0%
	00099224	The 2018 main replacement program will replace 10,023 feet of pipelines in the Los Altos Suburban district at an estimated cost of \$189 per foot.	\$ 1,433,765	\$ 2,967,136	\$ 1,533,371	48%
	LAS0900	Meter Replacement Program	\$ 121,982	\$ 294,518	\$ 172,536	41%
<b>Specifics Total</b>			<b>\$ 2,045,946</b>	<b>\$ 5,922,011</b>	<b>\$ 3,876,065</b>	<b>35%</b>
<b>Non-Specifics Total</b>			<b>\$ 1,486,200</b>	<b>\$ 1,486,200</b>	<b>\$ -</b>	<b>100%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2018</b>			<b>\$ 3,532,146</b>	<b>\$ 7,408,211</b>	<b>\$ 3,876,065</b>	<b>48%</b>

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## C. DISCUSSION

The Los Altos District recorded \$3,889,133 in annual average gross plant additions for the most recent six-year period 2009-2014.<sup>63</sup> **Table 4-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

**Table 4-C: Capital Budget Proposals vs. Recorded Expenditures– Los Altos District**

Los Altos (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 3,889.1	100%
ORA	\$ 1,990.1	\$ 3,347.4	\$ 3,229.5	\$ 3,532.1	\$ 3,024.8	78%
CWS	\$ 5,769.8	\$ 4,904.0	\$ 5,260.1	\$ 7,408.2	\$ 5,835.5	150%

ORA presents its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 Non-Specific projects (Section 2), and 2015 budget (Section 3) below.

## 8. Specific Projects

### *a. Automated Meter Reading (AMR) in Los Altos (PID: 97868)*

CWS requests \$321,559 in 2016 to install an AMR meters for 632 customers in Meter Reading Cycle M-01. Services in this area account for approximately 3% of the total number of services in Los Altos. CWS explains that the hilly terrain and narrow roads require that district employees drive to each location and stop in a lane of traffic or walk to read the meters.<sup>64</sup>

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<sup>63</sup> Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

<sup>64</sup> CWS Project Justifications Book, July 2015, pg. LAS PJ-223, Lines 40-41.

1 CWS explains that installing AMR will reduce the cost associated with meter reading.<sup>65</sup>  
2 However, during the September 17, 2015 Los Altos District Tour, ORA learned that there  
3 are no cost savings associated with the installation of AMR in this service area. CWS  
4 stated that there are two meter readers assigned to the area, and that after the AMR  
5 installation one of the two meter readers will be re-assigned to customer service duties or  
6 other maintenance work.<sup>66</sup> Moreover, during the District Tour, ORA observed that the  
7 service area is not a high traffic zone and there did not seem to be an issue of traffic flow  
8 or safety concerns. CWS did not provide any evidence relating to customer complaints  
9 about the company meter readers causing traffic problems, nor did it provide any meter  
10 reader safety incident reports CWS has read meters in this area successfully up until now,  
11 and without AMR. For this reason, and additional reasons presented in ORA's  
12 AMR/AMI testimony (see ORA's Report on Plant – Commission Issues), ORA  
13 recommends the Commission disallow this project.

14 *b. Replace flow meters at Stations 7, 10, 19, 104, and 38 (PID: 98765)*

15 CWS requests \$230,175 in 2016 to replace flow meters at Stations 7, 10, 19, 104, and 38.  
16 CWS explains that the existing flow meters need replacement because their mechanical  
17 bearing components require replacement and do not meet current National Sanitation  
18 Foundation (NSF which became NSF International) standards. ORA inquired about the  
19 maintenance records for these flow meters and CWS only reported calibrating the flow  
20 meter for Station 7 once. CWS did not provide maintenance records for the other four  
21 flow meters at Stations 10, 19, 104, and 38.<sup>67</sup> Therefore, ORA cannot verify if the  
22 components need replacement. Furthermore, there is no evidence that the flow meters

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<sup>65</sup> Ibid, pg. LAS PJ-224, Line 57.

<sup>66</sup> Ibid, pg. LAS PJ-224, Lines 54-55.

<sup>67</sup> CWS Response to ORA Data Request SN2-012, Q. e.1, Attachment.

1 are not meeting the NSF Standards. Therefore, ORA recommends the Commission  
2 disallow this project.

3 *c. Vehicle Replacements (PID: 99157)*

4 CWS requests \$137,674 in 2016 to replace three vehicles (all heavy duty). For reasons  
5 presented in ORA's Report on Plant - Common Issue, ORA recommends that V204024  
6 and V206110 be authorized in 2016 for a total of \$83,042, and V213026 be authorized in  
7 2017 for \$54,632.

8 *d. Vehicle Replacements (PID: 99159)*

9 CWS requests \$148,087 in 2018 to replace three vehicles (all heavy duty). For reasons  
10 provided in ORA's Report on Plant - Common Issues, ORA recommends the  
11 Commission disallow these vehicle replacements.

12 *e. Tenant Improvements of the Los Altos Suburban Commercial Office*  
13 *Space at 949 B Street (PID: 101681)*

14 CWS requests \$314,579 in 2016 to make various improvements to the Los Altos-  
15 District's leased commercial office space at 949 B Street in Los Altos. CWS explains  
16 that this project request was made based on an independent assessment and analysis  
17 performed by Facilities First in 2014.<sup>68</sup> CWS explains that the assessment was initiated  
18 to find a solution to what it describes as the space overcrowding at the 1555 Miramonte  
19 Avenue operations center located near the Los Altos- Suburban Commercial Office  
20 Space. CWS states that it has occupied the 1555 Miramonte building since 1953 and it  
21 has not been significantly remodeled since 1979. CWS acknowledges that this is not a  
22 permanent fix to the space needs; however, the company believes that it makes the most

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<sup>68</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-272.

1 economic sense “while the company develops a plan for a new combined facility in the  
2 near future.”<sup>69,70</sup>

3 CWS outlines the details of the improvements, including a new cubicle, two new offices,  
4 four new workstations, the addition of a common area and upgraded security to  
5 accommodate growth in the “cross connection control program and the main replacement  
6 program also requested in this GRC.”<sup>71</sup> CWS plans to add six new employees for the  
7 program.<sup>72</sup>

8 CWS plans to pursue the new facility request in a future separate filing, because it  
9 determined that the 1555 Miramonte facility does not have space for the addition of a  
10 water quality sample area, storage, fleet parking, a dedicated room to protect and monitor  
11 SCADA, and other required facilities. CWS describes that the 1555 Miramonte facility  
12 currently has a small space dedicated for SCADA and a water quality lab area that is  
13 overcrowded, with little room for storage. CWS states that fleet parking is located at the  
14 1579 Miramonte lot, adjacent to the 1555 Miramonte office, the building bathrooms are  
15 not Americans with Disabilities Act (ADA) compliant, and the building is not  
16 constructed to current seismic requirements. CWS’s plan to relocate all employees from  
17 1555 Miramonte and 949 B Street to one building to be proposed and located at the 1555  
18 and 1579 Miramonte sites.<sup>73</sup>

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<sup>69</sup> Ibid, pg. LAS PJ-272.

<sup>70</sup> California Water Service Company, Application 15-07-015, Special Request: Separate Application for Building Improvements, pg. 220.

<sup>71</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-273.

<sup>72</sup> CWS Response to ORA Data Request YWC-001, Attachment 1.

<sup>73</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-273.

1 ORA inquired why CWS is pursuing this improvement project while acknowledging that  
2 a new facility will be requested in the future. CWS explained that:

3 The LAS district is in the process of increasing temporary construction staff to  
4 accomplish an accelerated main replacement program. This work to the leased  
5 office needs to be completed now in order to facilitate these new temporary  
6 employees.<sup>74</sup>

7 ORA does not recommend approval of the total Los Altos District main replacement  
8 budget as requested by CWS in this GRC (see ORA's Report on Plant – Common  
9 Issues); thus eliminating the need for this office project. CWS has been installing about  
10 the same amount (in linear feet) of pipeline with its existing staff. Therefore, even if the  
11 Commission adopts the main replacement level requested by CWS, there still is no need  
12 to add staff. Furthermore, during the September 17, 2015 District tour, ORA visited the  
13 leased space at 949 B Street and noticed empty desks with computers and a lot of empty  
14 space in the main office room. ORA does not think it is economical to make  
15 improvements to a leased office space when CWS already plans to add new space in the  
16 near future. Therefore, ORA recommends the Commission disallow this project.

17 *f. Replace existing hydro-pneumatic tank at Station 13 (PID: 97700)*

18 CWS requests \$147,673 in 2017 to replace an existing 2,000 gallon hydro-pneumatic  
19 tank at Station 13. CWS explains that the tank was installed in 1958 and designed for a  
20 maximum operating pressure of 75 psi. The tank's current operating pressure varies  
21 between 40 psi and 80 psi, which is above the designed 75 psi maximum.<sup>75</sup> CWS  
22 provided an Inspection Report from October 13, 2014 indicating that the tank should be  
23 replaced in 2017 due to poor condition. CWS's Inspection Report template asks for an

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<sup>74</sup> CWS Response to ORA Data Request DG-012, Q. 3.e.

<sup>75</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-226, Line 27.

1 assessment of both the tank's exterior and interior coating. The results of the inspection  
2 from both areas are then combined to formulate a recommendation. However, for this  
3 specific tank, the interior coating was not inspected because it was "inaccessible at time  
4 of inspection."<sup>76</sup> The Inspection Report's recommendation was based solely on the  
5 inspection of the exterior coating condition. Therefore, the recommendation was made  
6 based on incomplete information (inspection). CWS should follow the tank inspection  
7 and replacement evaluation procedures consistent with its Inspection Report template and  
8 inspect the interior before determining the need for a complete replacement of the tank.

9 Furthermore, CWS contradicted its own project justification by explaining, in its  
10 response to ORA's data request, that this tank has never operated over its 75 psi  
11 nameplate.<sup>77</sup> Therefore, for all of the above reasons, ORA recommends the Commission  
12 disallow this project.

13 *g. Replace existing panelboard at Station 9 (PID: 97865)*

14 CWS requests \$194,949 in 2017 to replace the existing panelboard at Station 9. CWS  
15 explains that the existing panelboard was installed in the early 1950s and will require  
16 upgrades to ensure that the station remains reliable.<sup>78</sup> Furthermore, CWS explains that  
17 several of the components require replacement, and that the replacement parts are not  
18 available.<sup>79</sup> ORA inquired about the specification sheets for this panelboard; however, in  
19 response, CWS explained that the specification sheets are not available.<sup>80</sup> Without this  
20 information, ORA cannot verify CWS's claims about the components or which of the

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<sup>76</sup> CWS Response to ORA Data Request DG-012, Attachment A LAS 013-PT1.

<sup>77</sup> Ibid, Q. 1.b.

<sup>78</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-219, Lines 31-32.

<sup>79</sup> Ibid, pg. LAS PJ-220, Lines 43-44.

<sup>80</sup> CWS Response to ORA Data Request DG-006, Q. 3.a.

1 components have been identified for replacement and the reason for the replacement.  
2 CWS also provided the panelboard inspection report in response to ORA's inquiry.<sup>81</sup> The  
3 inspection report did not indicate any corrective action required or recommend  
4 replacement of the panelboard. Therefore, ORA recommends the Commission disallow  
5 this project.

6 *h. Add cameras, motion detectors and alarms at Station 17 (PID: 98494)*

7 CWS requests \$52,789 in 2017 to upgrade security at Station 17. The site currently has a  
8 perimeter fence. CWS requests the addition of cameras, motion detectors and alarms to  
9 prevent future site vandalism.<sup>82</sup> However, upon ORA inquiry, CWS disclosed that in the  
10 last five years the site has only experienced one break-in, in which the tank was graffitied  
11 (April 2013).<sup>83</sup> Furthermore, CWS infrastructure stations are in compliance with the  
12 Department of Homeland Security's (DHS) "Water Sector-Specific Plan." The plan  
13 states the following: "Initial security efforts such as installing fencing, locks, and access  
14 systems focused more on the concepts of prevention and detection and less on response  
15 and recovery efforts"<sup>84</sup> address the basic protection. As discussed in ORA's Report on  
16 Plant - Common Issues, the security upgrade is not needed given its break-in history and  
17 apparent compliance with the DHS Plan. Therefore, ORA recommends the Commission  
18 disallow this project.

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<sup>81</sup> Ibid, Q. 3.a. Station 9 Panelboard Inspection Report.

<sup>82</sup> Ibid, Q.17.a.

<sup>83</sup> CWS Response to ORA Data Request DG-022, Q.2.b.

<sup>84</sup> Department of Homeland Security, Water Sector-Specific Plan, An Annex to the National Infrastructure Protection Plan, 2010, pg. 32.

1                   *i. Add cameras, motion detectors and alarms at Station 20 (PID: 98501)*

2   CWS requests \$52,789 in 2017 to upgrade security at Station 20. The site currently has a  
3   perimeter fence. CWS requests the addition of cameras, motion detectors and alarms to  
4   prevent future site vandalism.<sup>85</sup> However, upon ORA inquiry, CWS disclosed that in the  
5   past five years the site has only experienced one break-in, in which no damage was done  
6   and only garbage was left behind (June 2011).<sup>86</sup> As discussed in ORA's Report on Plant  
7   - Common Issues, the upgraded security at this station is not needed given its break-in  
8   history and compliance with the DHS Plan. Therefore, ORA recommends the  
9   Commission disallow this project.

10                   *j. Add cameras, motion detectors and alarms at Station 31 (PID: 98503)*

11   CWS requests \$46,278 in 2018 to upgrade security at Station 31. The site currently has a  
12   perimeter fence. CWS requests the addition of cameras, motion detectors and alarms to  
13   prevent future site vandalism<sup>87</sup> However, upon ORA inquiry, CWS disclosed that the site  
14   has not had any break-ins.<sup>88</sup> As discussed in ORA's Report on Plant - Common Issues,  
15   the upgraded security at this station is not needed given its break-in history and  
16   compliance with the DHS Plan. Therefore, ORA t recommends the Commission disallow  
17   this project.

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<sup>85</sup> CWS Response to ORA Data Request DG-006, Q.17.a.

<sup>86</sup> CWS Response to ORA Data Request DG-022, Q.2.b.

<sup>87</sup> CWS Response to ORA Data Request DG-006, Q.17.a.

<sup>88</sup> CWS Response to ORA Data Request DG-022, Q.2.b.

1                    *k. Replace existing panelboard at Station 19 (PID: 97987)*

2    CWS requests \$199,823 in 2018 to replace the existing panelboard at Station 19. CWS  
3    explains that the existing panelboard was installed in the early 1950 s and will require  
4    upgrades to ensure that the station remains reliable.<sup>89</sup> Furthermore, CWS explains that  
5    several of the components require replacement, and that replacement parts are not  
6    available.<sup>90</sup> ORA inquired about the specification sheets for this panelboard; however, in  
7    response, CWS explained that the specification sheets are not available.<sup>91</sup> Without this  
8    information, ORA cannot verify CWS's claims (see Discussion of Station 9 Project - PID  
9    97865). CWS also provided the panelboard inspection report in response to ORA's  
10   inquiry.<sup>92</sup> The inspection report did not mention whether replacement parts or  
11   components can be found or are available. The report also did not indicate any corrective  
12   action required or recommend replacement of the panelboard. Therefore, ORA  
13   recommends the Commission disallow this project.

14                    *l. Replace existing panelboard at Station 27 (PID: 98010)*

15   CWS requests \$277,563 in 2018 to replace the existing panelboard at Station 27. CWS  
16   explains that the existing panelboard was installed in the early 1960s and will require  
17   upgrades to ensure that the station remains reliable.<sup>93</sup> Furthermore, CWS explains that  
18   several of the components require replacement; however, replacement parts are not

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<sup>89</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-244, Line 31.

<sup>90</sup> Ibid, pg. LAS PJ-220, Lines 43-44.

<sup>91</sup> CWS Response to ORA Data Request DG-006, Q. 3.a.

<sup>92</sup> Ibid, Q. 3.a. Station 19 Panelboard Inspection Report.

<sup>93</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-254, Line 29.

1 available.<sup>94</sup> ORA inquired about the specification sheets for this panelboard; however, in  
2 response, CWS explained that the specification sheets are not available.<sup>95</sup> Without this  
3 information, ORA cannot verify CWS's claims (see Discussion of Station 9 Project (PID  
4 97865). CWS also provided the panelboard inspection report in response to ORA's  
5 inquiry.<sup>96</sup> The inspection report did not mention whether replacement parts or  
6 components can be found or are available. The report also did not indicate any corrective  
7 action required or recommend replacement of the panelboard. Therefore, ORA  
8 recommends the Commission disallow this project.

9 *m. Add panelboard overhangs at Stations 24, 27, 28, 30, 31 and 32 (PID:*  
10 *98483)*

11 CWS requests \$16,400 in 2017 to add panelboard overhangs at various stations. CWS  
12 explains that the overhangs protect the panelboards from weather-related damage.<sup>97</sup>  
13 However, when ORA inquired about the total cost of the project, CWS provided a cost  
14 estimate of only \$8,779 for the total project.<sup>98</sup> ORA does not contest this project but  
15 recommends using CWS's updated, lower estimates of \$8,779.

16 *n. Add panelboard overhangs at Stations 33, 34, 35, 104, and 111 (PID:*  
17 *98518)*

18 CWS requests \$14,167 in 2018 to add panelboard overhangs at Stations 33, 34, 35, 104,  
19 and 111.<sup>99</sup> CWS explains that the overhangs protect the panelboards from weather

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<sup>94</sup> Ibid, July 2015, pg. LAS PJ-220, Lines 43-44.

<sup>95</sup> CWS Response to ORA Data Request DG-006, Q. 3.a.

<sup>96</sup> Ibid, Q. 3.a. Station 27 Panelboard Inspection Report.

<sup>97</sup> Ibid, Q.4.a.

<sup>98</sup> Ibid.

<sup>99</sup> CWS Response to ORA Data Request DG-006, Q.4.b.

1 related damage.<sup>100</sup> ORA makes a similar adjustment as the one in PID 98483 and  
2 recommends using CWS's updated, lower estimates of \$6,386.

3 *o. Water Supply and Facility Master Plan (PID: 98402)*

4 CWS requests \$469,018 in 2018 to update the Water Supply and Facility Master Plan  
5 (WSFMP) for the Los Altos District. CWS explains that the most recent WSFMP was  
6 prepared in 2001 and is outdated.<sup>101</sup> CWS states that it needs to update the water demand  
7 analysis, existing water facilities, performance criteria, water supply requirements, and  
8 plan recommendations.<sup>102</sup> CWS originally requested this plan update in the 2009 GRC  
9 (PID 29729) with a proposed budget of \$484,000 for both the hydraulic model and  
10 master plan; however, ORA did not recommend the Commission authorize the project  
11 because according to the Rate Case Plan, it was too soon for an update. The Rate Case  
12 Plan states, "Any water utility filing a GRC on or after July 1, 2008 must submit a long-  
13 term, 6-10 year Water Supply and Facilities Master Plan to identify and address aging  
14 infrastructure needs."<sup>103</sup> Therefore, "CWS and ORA agreed in settlement to defer the  
15 project from the 2009 GRC because the existing master plan was less than 6-10 years old  
16 at that time as recommended in the MDR."<sup>104</sup>

17 The WSFMP project (PID: 29729) was included in the 2012 GRC Settlement as a  
18 Carryover Project in the amount of \$244,200.<sup>105</sup> In an email dated January 28, 2016,

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<sup>100</sup> Ibid, Q.4.a.

<sup>101</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-296, Lines 18-19.

<sup>102</sup> Ibid, Lines 13-15.

<sup>103</sup> Decision 07-05-062, p.A-28, Section 18.

<sup>104</sup> CWS Response to ORA Data Request DG-006, Q.2.f.

<sup>105</sup> CWS, 2012 GRC Settlement Agreement, pg. 273, Table: Los Altos Suburban: Projects Not In Service as of January 2012.

1 CWS explains that this carryover project was a “scaled down version”<sup>106</sup> of the 2009  
2 WSFMP project with a reduced scope which only included upgrading the hydraulic  
3 model.<sup>107</sup> Although the project number and settlement budget are included in the 2012  
4 GRC Settlement in table “Los Altos Suburban, Projects Not In Service as of January  
5 2012,” no explanation was included describing the scaled down project scope even  
6 though other projects with a change in scope have explanations.<sup>108</sup> CWS explains that  
7 this project was included in the 2015 Los Altos District Results of Operation Report table  
8 of “2012 GRC specific authorized projects” with a “PowerPlan Status” of “completed” in  
9 the Year 2013 at a final cost of \$328,974. The final cost exceeds the settled amount of  
10 \$244,200, and is only for the hydraulic model upgrade.<sup>109</sup> CWS explains that the project  
11 was not yet booked to plant at the time of the 2015 GRC filing in July 2015; however, the  
12 project has since been completed.<sup>110</sup> The cost overrun of \$77,674 was due to added  
13 consultant and CWS labor hours to verify field conditions, unexpected tasks, and  
14 calibrating the model.<sup>111</sup>

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<sup>106</sup> Email from Darin Duncan of CWS to Daphne Goldberg of ORA (January 28, 2016, 4:37PM PT) (on file with author).

<sup>107</sup> Ibid.

<sup>108</sup> D.14-08-011, Settlement Agreement, pg. 273.

<sup>109</sup> CWS 2015 General Rate Case Report on the Results of Operation for the Los Altos District, July 2015, pg. 30.

<sup>110</sup> Email from Darin Duncan of CWS to Daphne Goldberg of ORA (January 28, 2016, 4:37PM PT) (on file with author).

<sup>111</sup> CWS 2015 General Rate Case Report on the Results of Operation for the Los Altos District, July 2015, Attachment C, pg. 8.

1 CWS requests the WSFMP non-hydraulic model portion in this GRC (PID 98402) with a  
2 proposed budget of \$469,019. This would bring the total WSFMP Project Cost to  
3 \$797,993 (\$328,974+\$469,019).

4 ORA does not agree that CWS requires an additional \$469,019 to complete the WSFMP  
5 Project because CWS has already completed one component of the WSFMP, the  
6 hydraulic model, at a final cost of \$328,974. To complete the WSFMP, CWS needs to  
7 prepare the plan itself. Therefore, ORA recommends a budget of \$140,045 (\$469,019  
8 less \$328,974 amount already spent).

9 *p. Replace old copier (PID: 98513)*

10 CWS requests \$14,522 in 2018 to replace the copier in the district's field office. CWS  
11 explains that the copier is old and requires maintenance repeatedly.<sup>112</sup> CWS did not  
12 provide any supporting documents regarding the frequency or type of maintenance  
13 required, or information about the year the copier was purchased and the cost of the  
14 copier. Without such information, ORA cannot confirm that replacement is needed;  
15 therefore, ORA recommends the Commission disallow this project.

16 *q. Station 35 overhaul (PID: 99098)*

17 CWS requests \$572,421 in 2018 to overhaul Station 35 because there is currently “no  
18 way to move water from the 665 upper zone to the 445 lower zone”<sup>113</sup> during a power  
19 outage. The project includes the following items:<sup>114</sup>

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<sup>112</sup> CWS Response to ORA Data Request DG-006, Q.14.a.

<sup>113</sup> CWS Project Justification Report, July 2015, pg. LAS PJ-287, Line 28.

<sup>114</sup> Ibid, Lines 14-22.

- 1        1. Installation of a 6-inch pressure reducing valve (PRV) to allow for water to flow
- 2        to the 445 zone from the 665 zone. Check valves will also be installed
- 3        downstream to better control flow and to keep water from reverse flowing.
- 4        2. Replacement two portable booster connection hydrants and attach to the proposed
- 5        6-inch pressure reducing valve to allow for a portable booster engine to be
- 6        connected to boost water between the zones in the event of a well failure.
- 7        3. Install a retaining wall to secure the hillside at the base of the station. The
- 8        retaining wall will be 47-feet long, 10-feet high.

9        Install a turn-out to allow for space to park a vehicle that hauls a portable booster on a  
10       trailer. The turn-out will be 47-feet long and 10-feet wide. In the Project Justification,  
11       CWS explains that the station building was installed around 1975 and by 2017, the  
12       station will be in service 42 years.<sup>115</sup>

13       In discovery, ORA learned that there has not been any power outages in the past five  
14       years that would require moving water from the 665 upper zone to the 445 lower zone.<sup>116</sup>  
15       Therefore, CWS has not been in a situation where it had to move water from the 665 to  
16       the 445 zone during a power outage. Furthermore, ORA learned during the September  
17       17, 2015 Los Altos District tour, that Station 35 was taken offline in 1994 and has not  
18       been in operation for 21 years. CWS has not adequately justified the need to return  
19       Station 35 to its system. Therefore, ORA recommends that the Commission disallow this  
20       project.

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<sup>115</sup> Ibid, Line 26.

<sup>116</sup> CWS Response to ORA Data Request DG-012, Q.2.a.

1                    *r. Small and Large Meter Replacement Program (PID:LAS0900)*

2    **Table 4-D** below lists CWS's requests and ORA's recommendation on the replacement  
3    budget of small and large meters in the Los Altos District. ORA's recommended budgets  
4    are based on detailed analysis and recommendation in its Report on Plant – Common  
5    Issues.

**Table 4-D: Meter Replacement Budgets – Los Altos District**

District:	Los Altos Suburban		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 116,514	\$ 207,951
2017	0900	\$ 119,263	\$ 213,150
2018	0900	\$ 121,982	\$ 218,479

*s. Pipeline Replacement Program (PIDs: 99221, 99223, and 99224)*

CWS requests \$2,824,162 in 2016, \$2,894,766 in 2017, \$ 2,967,136 in 2018 to replace 10,023 feet of pipeline per year. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues Testimony (see ORA's Report on Plant – Common Issues). **Table 4-E** below shows ORA's recommendations for pipeline replacement and the associated budget in this district.

**Table 4-E: Pipeline Replacement Program Budget – Los Altos District**

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099221	3,646	\$ 1,369,484	10,023	\$ 2,824,162
2017	00099223	3,646	\$ 1,401,804	10,023	\$ 2,894,766
2018	00099224	3,646	\$ 1,433,765	10,023	\$ 2,967,136

*t. Replace SCADA Software and Hardware (PID: 99172)*

CWS requests \$574,709 in 2018 for the replacement of the SCADA system server and software program. For reasons identified in ORA's Report on Plant - Common Issues, ORA recommends the Commission disallow this project.

1                    *u. Adjustment to Recorded Plant Balance: Field Yard Property Purchase*  
2                    *and the Los Altos Land Development Project (PID 67949)*

3    ORA recommends removing \$3,129,778 from the 2014 Net Plant Additions. This  
4    amount corresponds to the 2010 purchase price of land that CWS intended to use as the  
5    site of a new customer and operations center (yet to be proposed).

6    In April 2010, CWS purchased a property (1579 Miramonte Avenue) adjacent to the  
7    existing Los Altos Suburban operations center for \$3,129,778.<sup>117</sup> The land was  
8    purchased for the purpose of constructing a new combined customer/operations center.<sup>118</sup>  
9    CWS explained that the land and new building were thought to be necessary because the  
10   existing operations center could not accommodate the required lobby, security, storage  
11   area, SCADA area, water quality sample area, bathrooms, break-room, record keeping,  
12   and future growth needs.<sup>119</sup>

13   In the last GRC, CWS included the land purchase in the 2012 beginning balance of UPIS  
14   and requested an additional \$378,625 in land improvements. At that time, ORA objected  
15   to the inclusion of the land purchase in rate base because CWS failed to justify or even  
16   disclose its plans for a new customer operations center. In settlement, “Cal Water  
17   acknowledged the error of including the land purchase and site upgrades in the 2012  
18   beginning plant balance and agreed to remove those costs from the 2012 beginning plant  
19   balance, for a total reduction of \$2,778,000.”<sup>120</sup> The company further agreed it would

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<sup>117</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-262, Lines 18-20.

<sup>118</sup> 2012 CWS General Rate Case, Settlement Agreement, pg. 277, Lines 16-17.

<sup>119</sup> CWS Project Justifications Report, July 2015, pg. LAS PJ-262, Lines 36 to LAS PJ-262 Lines 38-41.

<sup>120</sup> D.14-08-011, Exhibit A, pg. 277.

1 either “propose a complete project in the next GRC or [would] dispose of the property if  
2 it chooses not to pursue the customer operations center project.”

3 Contrary to the terms of the adopted settlement, CWS has neither proposed a complete  
4 project nor disposed of the property. Rather, the company once again included the land  
5 purchase in rate base under the pretense that such expenditures have resulted in the used  
6 and useful creation of a parking lot and open-air storage facility. The land is clearly not  
7 being used for its intended purpose, and CWS’s decision to use the vacant lot for parking  
8 and storage does not make the property qualified for inclusion in rate base. CWS in this  
9 GRC indicates that it has decided to delay a request for a full new customer and  
10 operations center “in favor of more pressing capital needs.”<sup>121</sup> CWS plans to file a  
11 separate application for the new customer and operations building after higher priority  
12 projects have been completed.<sup>122</sup> However, CWS, citing the “very uncertainty of future  
13 drought needs,”<sup>123</sup> does not provide a specific time frame for this separate application.

14 CWS’s current proposal to include the land purchase as 2014 plant additions without a  
15 complete and detailed project proposal for a new customer operations center (or even a  
16 time frame for when a complete project proposal might be presented for Commission  
17 review) is unreasonable and contrary to both the letter and spirit of CWS’s agreement in  
18 the last GRC settlement. This is good example of gold-plating rate base with no real  
19 benefit to ratepayers. Therefore, ORA recommends that the Commission disallow the  
20 \$3,129,778 plant addition associated with this land purchase.

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<sup>121</sup> CWS 2015 Prepared Testimony of Stan Ferraro, Chapter 2. Special Requests, July 2015, pg. 221, Line 26.

<sup>122</sup> Ibid, pg. 222, Lines 16-19

<sup>123</sup> Ibid, pg. 222, Lines 22-23.

1        **9. Non-Specific Budgets for 2016 to 2018**

2        CWS requests \$1,052,100 in the Non-Specific Budget to address unforeseen, unplanned,  
3        and emergency projects and regulatory compliant projects. ORA's Report on Plant -  
4        Common Issues presents ORA's recommended total disallowance of this budget.

5        **10. 2015 Capital Budget**

6        CWS requests \$5,061,800 for plant additions in 2015, which consist of projects  
7        authorized for 2015 in the last GRC and projects authorized from previous  
8        GRCs. ORA's Report on Plant - Common Issues presents its analysis and basis for  
9        adjusting 2015 capital additions for Los Altos.

10       **D. CONCLUSION**

11       ORA's recommendations presented above have been incorporated in the calculations for  
12       ORA's estimated Plant in Service shown in Table 7-1 in its Company-wide Report,  
13       Appendix RO.

## **Chapter 5: Plant – Marysville District**

### **A. INTRODUCTION**

This chapter presents ORA’s analyses and recommendations for Plant in Service for CWS’s Marysville District.

### **B. SUMMARY OF RECOMMENDATIONS**

Based on ORA’s review and analysis of CWS’s requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA’s recommended capital budget summary presented in **Table 5-A** below. ORA’s estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding Pipeline Replacements, Meter Replacements, Vehicle Replacements, Pump Replacements, Flow Meters, and Supervisory Control and Data Acquisition (SCADA) Replacement.

**Table 5-A: Capital Budget Summary – Marysville District**

Marysville (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 63.1	\$ 483.6	\$ 487.6	\$ 496.8	\$ 382.8
CWS	\$ 979.8	\$ 1,010.7	\$ 945.5	\$ 1,717.4	\$ 1,163.3
CWS > ORA	\$ 916.7	\$ 527.1	\$ 457.9	\$ 1,220.6	\$ 780.6
ORA as % of CWS	6%	48%	52%	29%	33%

**Table 5-B: Capital Budget Details – Marysville District**

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	62714	Install Sample Stations at Sta 9	\$ 6,688	\$ 8,361	\$ 1,672	80%
	62772	Install Sample Station at Sta 12	\$ 6,081	\$ 8,361	\$ 2,280	73%
	62857	Install Sample Station at Sta 7	\$ 6,663	\$ 8,604	\$ 1,942	77%
	62859	Install Sample Station at Sta 13	\$ 3,137	\$ 8,604	\$ 5,467	36%
	62860	Install Sample Station at Sta 8	\$ 7,149	\$ 8,848	\$ 1,698	81%
	63296	Chlorine Storage Shed at Station 8	\$ 6,137	\$ 8,829	\$ 2,692	70%
	63374	Chlorine Storage Shed at Station 12	\$ 5,972	\$ 8,829	\$ 2,858	68%
	00063914	Field - Replace Meter Reading Equipment	\$ -	\$ 12,962	\$ 12,962	0%
	MRL0900	Meter Replacement Program	\$ -	\$ 21,729	\$ 21,729	0%
	00065090	Vehicle - New Vehicle - District Manager	\$ -	\$ 41,800	\$ 41,800	0%
<b>Specifics Total</b>			<b>\$ 41,827</b>	<b>\$ 85,339</b>	<b>\$ 43,512</b>	<b>49%</b>
<b>Non-Specifics Total</b>			<b>\$ 21,224</b>	<b>\$ 145,632</b>	<b>\$ 124,408</b>	<b>15%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ 748,826</b>	<b>\$ 748,826</b>	<b>0%</b>
<b>TOTAL 2015</b>			<b>\$ 63,052</b>	<b>\$ 979,797</b>	<b>\$ 916,745</b>	<b>6%</b>

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097958	Replacement of pump and 7.5 Hp motor.	\$ -	\$ 48,243	\$ 48,243	0%
	00099350	The 2016 main replacement program will replace 1,426 feet of pipelines in the Marysville district	\$ 342,816	\$ 401,801	\$ 58,985	85%
	MRL0900	Meter Replacement Program	\$ 3,385	\$ 26,660	\$ 23,275	13%
	00098152	Hydrant Meter Reduced Pressure Principal Assembly	\$ 5,163	\$ 5,163	\$ -	100%
	00098668	Flat to meter retrofits, 250 in 2016	\$ 127,833	\$ 121,978	\$ (5,855)	105%
	00098713	Panelboard Replacement at Marysville Station 7	\$ -	\$ 231,091	\$ 231,091	0%
	00098666	Replace pipe locator	\$ 4,371	\$ 4,371	\$ -	100%
<b>Specifics Total</b>			<b>\$ 483,568</b>	<b>\$ 839,306</b>	<b>\$ 355,739</b>	<b>58%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 171,400</b>	<b>\$ 171,400</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2016</b>			<b>\$ 483,568</b>	<b>\$ 1,010,706</b>	<b>\$ 527,139</b>	<b>48%</b>

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00099351	The 2017 main replacement program will replace 2,009 feet of pipelines in the Marysville district	\$ 350,907	\$ 562,233	\$ 211,326	62%
	00098906	Replace Flow meter at Station 9. build new vault.	\$ -	\$ 39,170	\$ 39,170	0%
	00098658	Replace valve box locator due to old age and constant breakdowns	\$ 2,240	\$ 2,240	\$ -	100%
	00098651	Retrofit 250 flat rate services to metered during 2017	\$ 131,021	\$ 125,027	\$ (5,994)	105%
	00098649	Replace deteriorating wooden fences at various locations	\$ -	\$ 13,892	\$ 13,892	0%
	MRL0900	Meter Replacement Program	\$ 3,465	\$ 27,326	\$ 23,861	13%
<b>Specifics Total</b>			<b>\$ 487,633</b>	<b>\$ 769,887</b>	<b>\$ 282,254</b>	<b>63%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 175,600</b>	<b>\$ 175,600</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2017</b>			<b>\$ 487,633</b>	<b>\$ 945,487</b>	<b>\$ 457,854</b>	<b>52%</b>

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	99174	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 330,653	\$ 330,653	0%
	00000102038	The 2018 main replacement program will replace 2,009 feet of pipelines in the Marysville district	\$ 358,907	\$ 576,288	\$ 217,381	62%
	00098645	Replace Canon Imagerunner 2880 multi-purpose copier/scanner	\$ -	\$ 5,740	\$ 5,740	0%
	00098693	Panelboard Replacement at Marysville Station 9	\$ -	\$ 239,830	\$ 239,830	0%
	00098708	Electrical Upgrade at Marysville Station 12. Replace panelboard, orifice plate and install back up VFD.	\$ -	\$ 229,030	\$ 229,030	0%
	00098643	Retrofit 250 flat rate services to metered services	\$ 134,304	\$ 128,153	\$ (6,151)	105%
	MRL0900	Meter Replacement Program	\$ 3,544	\$ 28,009	\$ 24,465	13%
<b>Specifics Total</b>			<b>\$ 496,755</b>	<b>\$ 1,537,702</b>	<b>\$ 1,040,947</b>	<b>32%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 179,700</b>	<b>\$ 179,700</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2018</b>			<b>\$ 496,755</b>	<b>\$ 1,717,402</b>	<b>\$ 1,220,647</b>	<b>29%</b>

### C. DISCUSSION

The Marysville District recorded \$996,348 in annual average gross plant additions for the most recent six-year period 2009-2014.<sup>124</sup> Table 5-C compares CWS's and ORA's estimates against recorded annual average gross plant additions.

**Table 5-C: Capital Budget Proposals vs. Recorded Expenditures– Marysville District**

Marysville (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
<b>2009-2014 Recorded</b>	--	--	--	--	\$ 996.3	100%
<b>ORA</b>	\$ 63.1	\$ 483.6	\$ 487.6	\$ 496.8	\$ 382.8	38%
<b>CWS</b>	\$ 979.8	\$ 1,010.7	\$ 945.5	\$ 1,717.4	\$ 1,163.3	117%

<sup>124</sup> Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

1 ORA presents its analyses and recommended adjustments to CWS’s requested capital  
2 budget for specific projects (Section 1), 2016-2018 Non-Specific projects (Section 2),  
3 and 2015 budget (Section 3) below.

## 4 **1. Specific Projects**

### 5 *a. Replacement of Pump and 7.5 Hp motor (PID: 97958)*

6 CWS requests \$48,243 in 2016 to replace the pump and the 7.5-Hp motor at Station 10.  
7 On May 28, 2014, the pump had a pump efficiency rating of “Very Good.” In ORA’s  
8 Report on Plant - Common Issues, ORA presents CWS’s and ORA’s pump and motor  
9 replacement approaches and proposals. Based on that analysis, ORA recommends the  
10 Commission disallow the project.

### 11 *b. Panelboard Replacement at Marysville Station 7 (PID: 98713)*

12 CWS requests \$231,091 in 2016 to replace the panelboard at Station 7. CWS explains  
13 that the panelboard was installed in 1974. CWS explains that several of the components  
14 require replacement; however, replacement parts are “difficult to obtain.”<sup>125</sup> ORA asked  
15 CWS to provide documents which support its assertion that replacement parts are  
16 difficult to obtain. CWS could not produce these documents.<sup>126</sup> Without this  
17 information, ORA cannot conclude that CWS cannot find replacement parts. Per ORA’s  
18 request, CWS also provided the most recent panelboard inspection dated April 27,  
19 2015.<sup>127</sup> The Inspection Report recommended a new panelboard for the station, but  
20 provided no detailed explanation to support the recommendation. Furthermore, CWS  
21 provided the maintenance records for this panelboard between 2005 and 2014 which

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<sup>125</sup> CWS Project Justifications Report, July 2015, pg. MRL PJ-202, Lines 27-29.

<sup>126</sup> CWS Response to ORA Data Request DG-025, Q. 2.a.

<sup>127</sup> CWS Response to ORA Data Request DG-002, Q. 5.b.

1 showed six work orders, three of which were preventive maintenance and the other three  
2 included a part replacement and upgrade.<sup>128</sup> From the work orders, ORA determined that  
3 total replacement of the panelboard is not required since preventive maintenance is  
4 allowing the panelboard to continue to operate. For these reasons, ORA recommends the  
5 Commission disallow this project.

6 *c. Panelboard Replacement at Marysville Station 9 (PID: 98693)*

7 CWS requests \$239,830 in 2018 to replace the panelboard at Station 9. CWS explains  
8 that the panelboard should be replaced for a few reasons. One, CWS states that the  
9 enclosure is rusted and has been painted over, the panel is mounted directly on the floor  
10 which could be a safety hazard and third, replacement parts for the starter, main breaker  
11 and motor breaker are difficult to find.<sup>129</sup> The panelboard was installed in 1953. ORA  
12 asked CWS to provide documents which support its assertion that replacement parts are  
13 difficult to obtain. CWS could not provide these documents.<sup>130</sup> Similar to PID 98713,  
14 ORA cannot conclude that CWS cannot find replacement parts. Furthermore, per ORA's  
15 request, CWS also provided the most recent panelboard inspection dated February 3,  
16 2014.<sup>131</sup> The Inspection Report shows that there are no corrective actions needed or  
17 recommended budget improvement necessary to ensure the panelboard is operating  
18 properly. CWS also provided the maintenance records for this panelboard between 2005  
19 and 2014 which showed eleven work orders, three of which were preventive maintenance  
20 and the remaining work orders were related to maintenance on the VFD, SCADA, and

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<sup>128</sup> CWS Response to ORA Data Request DG-025, Attachment B, MRL 7.

<sup>129</sup> CWS Project Justifications Report, July 2015, pg. MRL PJ-205-206, Lines 35-40; Lines 41-46.

<sup>130</sup> CWS Response to ORA Data Request DG-025, Q. 3.a.

<sup>131</sup> CWS Response to ORA Data Request DG-002, Q. 5.b.

1 new air conditioning unit.<sup>132</sup> The maintenance performed was mostly preventive with  
2 some equipment replacements for the 10-year period (2005-2014), and the panelboard  
3 can likely continue to operate without total replacement at this time. For these reasons,  
4 ORA does not recommend the Commission authorize this project.

5 *d. Panelboard Replacement, and Installation of a Variable Frequency Drive*  
6 *(VFD) at Marysville Station 12 (PID: 98693)*

7 CWS requests \$258,162 in 2018 for the following at Station 12:

- 8 1. Replace the panelboard.
- 9 2. Install a VFD.

10 *i. Panelboard Replacement*

11 CWS explains that the panelboard was installed in 1962 and should be replaced for a few  
12 reasons. CWS states that the enclosure is rusted and has been painted over, the panel is  
13 mounted directly on the floor which could be a safety hazard and third, and replacement  
14 parts for the starter, main breaker, and motor breaker are difficult to find.<sup>133</sup> ORA asked  
15 CWS to provide documents which support the company's assertion that replacement  
16 parts are difficult to obtain. CWS could not provide these documents.<sup>134</sup> Without this  
17 information, ORA cannot conclude that CWS cannot find replacement parts. Per ORA's  
18 request, CWS also provided the most recent panelboard inspection dated April 22,

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<sup>132</sup> CWS Response to ORA Data Request DG-025, Attachment B, MRL 9.

<sup>133</sup> CWS 2015 Marysville Project Justifications Report, July 2015, MRL PJ – 210, Lines 45-47.

<sup>134</sup> CWS Response to ORA Data Request DG-025, Q. 1.e.

1 2009.<sup>135</sup> The Inspection Report recommended upgrading the panelboard for the Station,  
2 although the recommendation was not supported with an explanation.

3 CWS also provided the maintenance records for this panelboard between 2005 and 2014  
4 which showed twenty-two work orders for the panelboard, five of which were preventive  
5 maintenance, three were project related, twelve were for contracted maintenance and two  
6 were classified as emergency.<sup>136</sup> ORA concludes that the number of work orders  
7 performed as contracted maintenance over the 10 year time period (2005-2014) is  
8 acceptable. Therefore, it seems the panelboard can continue to operate without  
9 replacement at this time. Based on the inspection report, maintenance records and lack of  
10 information regarding replacement parts, ORA recommends the Commission reject this  
11 project.

12 *ii. Install VFD*

13 CWS explains that “the system pressure for the entire Marysville District is held steady  
14 by the VFD at Station 9.”<sup>137</sup> For that reason, CWS asserts that if the VFD at Station 9  
15 goes offline for any reason, the entire Marysville system pressure will be affected. CWS  
16 proposes to install a VFD at Station 12, which would act as a backup to the VFD at  
17 Station 9. In response to ORA’s inquiry, CWS explained that the VFD at Station 9 was  
18 installed in 2005 and has only experienced two malfunctions, on July 2008 and October  
19 2015.<sup>138</sup> These two malfunctions only “required some troubleshooting and programming

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<sup>135</sup> CWS Response to ORA Data Request DG-002, Q. 5.b.

<sup>136</sup> CWS Response to ORA Data Request DG-025, Attachment B, MRL 12.

<sup>137</sup> CWS 2015 Marysville Project Justifications Book, July 2015, MRL PJ – 209, Line 23.

<sup>138</sup> CWS Response to ORA Data Request DG-025. Q. 1.a. and 1.b.

1 changes and were not major enough to cause an outage.”<sup>139</sup> The VFD is relatively new  
2 and has only had two issues that were resolved with troubleshooting and did not take the  
3 VFD out of service. Therefore, a backup VFD at Station 12 is not necessary. Based on  
4 this information, ORA recommends the Commission reject this project.

5 CWS’s project cost estimate also includes installation of a flow meter, vault, and remote  
6 terminal unit (RTU). However, CWS did not provide any supporting documents for  
7 these three items; thus, ORA removes from the cost estimate. ORA recommends the  
8 Commission reject this project in its entirety.

9 *e. Flat to Meter Retrofits (PIDs: 98668, 98651, and 98643)*

10 See ORA’s analysis and recommendations on flat-to-metered conversions in its Report  
11 on Plant – Common Issues.

12 *f. Small and Large Meter Replacement Program (PID: MRL0900)*

13 **Table 5-D** below lists CWS’s requests and ORA’s recommendation on the replacement  
14 budget of small and large meters in the Marysville District. ORA presents its  
15 recommendation in ORA’s Report on Plant - Common Issues.

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<sup>139</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (January 7, 2016, 3:19PM PT) (on file with author).

**Table 5-D: Meter Replacement Budgets – Marysville District**

District:	Marysville		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 3,385	\$ 26,660
2017	0900	\$ 3,465	\$ 27,326
2018	0900	\$ 3,544	\$ 28,009

***g. Pipeline Replacement Program (PID: 99350, 99351, and 102038)***

CWS requests \$401,801 in 2016, \$562,233 in 2017, and \$576,288 in 2018 to replace 1,426 feet of pipeline in 2016 and 2,009 feet/year in 2017 and 2018. ORA evaluated the leak rate, water loss, system age, results of American Water Works Association's (AWWA) recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant Issues Testimony (see Ora's Report on Plant – Common Issues). **Table 5-E** below shows ORA's recommendations for pipeline replacement and the associated budget in this district.

**Table 5-E: Main Replacement Requests – Marysville District**

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099350	998	\$ 342,816	1,426	\$ 401,801
2017	00099351	998	\$ 350,907	2,009	\$ 562,233
2018	00102038	998	\$ 358,907	2,009	\$ 576,288

***h. Replace SCADA Software and Hardware (PID: 99174)***

CWS requests \$330,653 in 2018 for the replacement of the SCADA system server and software program. For the reasons presented in ORA's Report on Plant - Common Issues, ORA recommends disallowing this project.

1           *i. Replace Flow Meter at Station 9 and Build New Vault (PID: 98906)*

2       CWS requests \$39,170 in 2017 to replace the flow meter and build a new vault at Station  
3       9. CWS explains that newer flow meters are more accurate than the existing flow  
4       meters.<sup>140</sup> CWS also explains that for all of its flow meters it uses a “planned  
5       maintenance process,” which includes filling out a Production Meter Calibration Form.<sup>141</sup>  
6       A flow meter test unit is used to capture flow data to measure accuracy. According to  
7       CWS, if the accuracy is not within the acceptable range, calibration, repair or  
8       replacement is recommended.<sup>142</sup> The flow meter at Station 9 was installed in 1998.<sup>143</sup>  
9       CWS did not provide any information about the estimated life expectancy for this type of  
10      meter. CWS provided the existing flow meter’s maintenance log, which shows a total of  
11      five work orders for this flow meter between 2005 and 2015 – three instances when the  
12      flow meter was malfunctioning or not recording, and two work orders were for  
13      calibrating the flow meter.<sup>144</sup> Four out of the five work orders have been closed, with the  
14      fifth dated August 2015 shown as being approved for work. ORA does not know the  
15      status of this specific work order. Since four of the work orders were closed, ORA  
16      concludes that the flow meter was recalibrated and is within the acceptable accuracy  
17      range. Therefore, it is not in need of replacement. ORA recommends that CWS continue  
18      to recalibrate and/or repair the flow meter as needed, and recommends the Commission  
19      reject this project.

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<sup>140</sup> CWS Response to ORA Data Request SN2-012, Q. 2.

<sup>141</sup> Ibid, Q. 2.

<sup>142</sup> Ibid, Q. 2.

<sup>143</sup> Ibid, Q. 2.c. Attachment q\_2\_e\_4.

<sup>144</sup> Ibid, Q. 2. Attachment q\_e\_1.

1           *j. Replace Canon Imagerunner 2880 multi-purpose copier (PID: 98645)*

2   CWS requests \$5,740 in 2018 to replace the copier in the district's customer service  
3   center. CWS explains that reproduction is poor quality as the drum causes lines on the  
4   copies and the printer often jams.<sup>145</sup> CWS has a maintenance contract for the copier.  
5   Therefore, ORA recommends the Commission reject this project. and CWS continue to  
6   maintain the copier under the existing contract to improve reproduction quality.

7           *k. Replace wooden fences at various locations (PID: 98649)*

8   CWS requests \$13,892 in 2017 to replace wooden fences at four locations:<sup>146</sup>

- 9           1. Pump Station 4
- 10          2. Pump Station 6
- 11          3. Pump Station 8
- 12          4. Pump Station 15

13   CWS explains that the fences do not adequately secure the facilities and are at the end of  
14   their useful life.<sup>147</sup> CWS does not have a specific fence installation date; however, it does  
15   know the wooden fences, except for that at Station 15, were installed prior to 1988.<sup>148</sup>  
16   The Station 15 chain link fence was installed in 1990.<sup>149</sup> CWS explains that only Stations  
17   6 and 15 have had break-ins with only minor damage in which the fences have been cut

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<sup>145</sup> CWS Response to ORA Data Request DG-002, Q. 8.

<sup>146</sup> Ibid, Q. 6.a.

<sup>147</sup> Ibid, Q. 6.b.

<sup>148</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (January 7, 2016, 3:17PM PT) (on file with author).

<sup>149</sup> Ibid.

1 or damaged over the years.<sup>150</sup> CWS would like to install taller fences, some with barbed  
2 wire to prevent future vandalism. Since there have only been break-ins with minor  
3 damage at two out of the four sites, none of which caused damage to the water supply  
4 infrastructure, ORA recommends the Commission reject this project.

## 5 **2. Non-Specific Budget for 2016 to 2018**

6 CWS requests \$171,400 in 2016, \$175,600 in 2017, and \$179,700 in 2018 in the Non-  
7 Specific Budget to address unforeseen, unplanned, and emergency. ORA's Report on  
8 Plant - Common Issues presents its recommended total disallowance of this budget.

## 9 **3. 2015 Capital Budget**

10 CWS requests \$979,800 for plant additions in 2015, which consist of projects authorized  
11 for 2015 in the last GRC and projects authorized from previous GRCs. ORA's Report on  
12 Plant - Common Issues presents its analysis and basis for the adjusting 2015 capital  
13 additions for Marysville.

## 14 **D. CONCLUSION**

15 ORA's recommendations presented above have been incorporated in the calculations for  
16 ORA's estimated Plant in Service shown in Table 7-1 in its Company-wide Report,  
17 Appendix RO.

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<sup>150</sup> Ibid.

## Chapter 6: Plant – Oroville District

### A. INTRODUCTION

This chapter presents ORA’s analyses and recommendations for Plant in Service for CWS’s Oroville District.

### B. SUMMARY OF RECOMMENDATIONS

Based on ORA’s review and analysis of CWS’s requested plant additions, ORA recommends disallowance, adjustment, deferral or Advice Letter treatment where appropriate. These recommendations form the basis of ORA’s recommended capital budget summary presented in **Table 6-A** below. ORA’s estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding Pipeline Replacements, Meter Replacements, Vehicle Replacements, Flow Meter Replacement, Pump Replacements, and Supervisory Control and Data Acquisition (SCADA) Replacement.

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**Table 6-A: Capital Budget Summary – Oroville District**

Oroville (\$000)	2015	2016	2017	2018	Annual Average
<b>ORA</b>	\$ 292.0	\$ 815.4	\$ 1,155.6	\$ 838.8	\$ 775.5
<b>CWS</b>	\$ 1,631.0	\$ 1,778.6	\$ 1,385.0	\$ 2,071.1	\$ 1,716.4
<b>CWS &gt; ORA</b>	\$ 1,339.0	\$ 963.2	\$ 229.4	\$ 1,232.2	\$ 941.0
<b>ORA as % of CWS</b>	18%	46%	83%	41%	45%

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**Table 6-B: Capital Budget Details – Oroville District**

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00020899	3 Fluoride Vatts w/ Pumps	\$ -	\$ 7,300	\$ 7,300	0%
	00020790	Linden Ave. - 960' 6" PVC; 26 1" Services; 3 Hydrants	\$ -	\$ 158,200	\$ 158,200	0%
	00020791	Wilcox Ave. - 858' 6" PVC; 19 1" Services	\$ -	\$ 142,400	\$ 142,400	0%
	00020790	Linden Ave. - 960' 6" PVC; 26 1" Services; 3 Hydrants	\$ -	\$ 14,000	\$ 14,000	0%
	00020791	Wilcox Ave. - 858' 6" PVC; 19 1" Services	\$ -	\$ 11,300	\$ 11,300	0%
	ORO0900	Meter Replacement Program	\$ -	\$ 11,718	\$ 11,718	0%
	00020790	Linden Ave. - 960' 6" PVC; 26 1" Services; 3 Hydrants	\$ -	\$ 26,800	\$ 26,800	0%
<b>Specifics Total</b>			<b>\$ -</b>	<b>\$ 371,718</b>	<b>\$ 371,718</b>	<b>0%</b>
<b>Non-Specifics Total</b>			<b>\$ 51,624</b>	<b>\$ 92,200</b>	<b>\$ 40,576</b>	<b>56%</b>
<b>Carry-Overs Total</b>			<b>\$ 240,409</b>	<b>\$ 1,152,551</b>	<b>\$ 912,142</b>	<b>21%</b>
<b>TOTAL 2015</b>			<b>\$ 292,032</b>	<b>\$ 1,631,020</b>	<b>\$ 1,338,988</b>	<b>18%</b>

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2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097457	Oroville CP System Upgrade -2016 - Sta.16 Tank 1	\$ 20,245	\$ 20,245	\$ -	100%
	00097507	Replace existing 5,000 gal hydropneumatic tank whose nameplate pressure is 75 psi, with a higher rated pressure vessel for normal operating conditions of 40 to 80 psi.	\$ -	\$ 35,004	\$ 35,004	0%
	00097507	Replace existing 5,000 gal hydropneumatic tank whose nameplate pressure is 75 psi, with a higher rated pressure vessel for normal operating conditions of 40 to 80 psi.	\$ -	\$ 117,670	\$ 117,670	0%
	00098031	A vacuum trailer or excavation trailer will be used to expose leaking services and leaking mains to make repairs quickly & safely.	\$ -	\$ 54,633	\$ 54,633	0%
	00098042	Guniting the earthen lined drain ditch at Oroville Reservoir to seal leak in the ditch.	\$ 81,251	\$ 81,251	\$ -	100%
	00098103	A new lawn mower, weed eater, and leaf blower are needed to maintain the gardening and lawn care at our stations.	\$ -	\$ 2,185	\$ 2,185	0%
	00098106	Additional filtering sand is needed for the multimedia filters to continue to produce high quality water.	\$ 24,734	\$ 24,734	\$ -	100%
	00098155	Hydrant Meter Reduced Pressure Principal Assembly	\$ 5,163	\$ 5,163	\$ -	100%
	00098700	Replace Manager's desk and add new tables and chairs are needed in the meeting room.	\$ -	\$ 11,145	\$ 11,145	0%
	00098715	Replace panelboard and install generator to operate all equipment at Oroville Station 15.	\$ -	\$ 429,283	\$ 429,283	0%
	00098902	Replace Flow meter at Sta. 10 to enable SCADA Monitoring	\$ -	\$ 29,873	\$ 29,873	0%
	00098905	Install a well level transducer at a well TBD, Connect to SCADA	\$ -	\$ 15,906	\$ 15,906	0%
	00098912	Install a solar powered wireless Transmitter and level Transducer at the Oroville treatment plant	\$ -	\$ 58,219	\$ 58,219	0%
	00099022	Replacement of pump and 100 Hp motor.	\$ -	\$ 101,113	\$ 101,113	0%
	00099417	Vehicle Replacement due to number of years in service	\$ -	\$ 74,300	\$ 74,300	0%
	0009928	The 2016 main replacement program will replace 1,838 feet of pipelines in the Oroville district at an estimated cost of \$159 per foot.	\$ 416,001	\$ 435,685	\$ 19,684	95%
	ORO0900	Meter Replacement Program	\$ 16,670	\$ 30,878	\$ 14,208	54%
<b>Specifics Total</b>			<b>\$ 564,064</b>	<b>\$ 1,527,288</b>	<b>\$ 963,223</b>	<b>37%</b>
<b>Non-Specifics Total</b>			<b>\$ 251,300</b>	<b>\$ 251,300</b>	<b>\$ -</b>	<b>100%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2016</b>			<b>\$ 815,364</b>	<b>\$ 1,778,588</b>	<b>\$ 963,223</b>	<b>46%</b>

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097516	Both station 1 and 3 are aging stations with multiple facilities needing replacement including electrical.	\$ 31,168	\$ 31,168	\$ -	100%
	00097517	Conceptual design and planning for reservoir improvements.	\$ -	\$ -	\$ -	#DIV/0!
	00098707	The open ditch coming into the treatment plant needs to be piped because the concrete lining has deteriorated and is leaking water.	\$ 206,318	\$ 206,318	\$ -	100%
	00098716	The Treatment Plant driveway, parking area, loading area, and, filter area needs paving. The existing pavement has deteriorated from new construction, years of use, sun & rain damage.	\$ 8,300	\$ 132,314	\$ 124,014	6%
	00098903	Install a well level transducer at a well TBD, Connect to SCADA	\$ -	\$ 16,304	\$ 16,304	0%
	00099208	Vehicle Replacements > 120,000 miles	\$ 42,559	\$ 42,559	\$ -	100%
	00099722	Replace forebay walls, screen, and associated appurtenances.	\$ 46,825	\$ 48,622	\$ 1,797	96%
	00099722	Replace forebay walls, screen, and associated appurtenances.	\$ 120,430	\$ 172,394	\$ 51,964	70%
	00099229	The 2017 main replacement program will replace 1,838 feet of pipelines in the Oroville district at an estimated cost of \$159 per foot.	\$ 425,819	\$ 446,577	\$ 20,758	95%
	ORO0900	Meter Replacement Program	\$ 17,064	\$ 31,649	\$ 14,585	54%
<b>Specifics Total</b>			<b>\$ 898,482</b>	<b>\$ 1,127,904</b>	<b>\$ 229,422</b>	<b>80%</b>
<b>Non-Specifics Total</b>			<b>\$ 257,100</b>	<b>\$ 257,100</b>	<b>\$ -</b>	<b>100%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2017</b>			<b>\$ 1,155,582</b>	<b>\$ 1,385,004</b>	<b>\$ 229,422</b>	<b>83%</b>

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2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00097871	Install solar panel equipment to power the treatment plant and reduce power purchased from PG&E.	\$ -	\$ 749,656	\$ 749,656	0%
	00098105	Replace the shingles on the company house at the Filter Plant.	\$ 35,598	\$ 35,598	\$ -	100%
	00098109	Replace broken gate valves in Mesa Ave. east of Spencer Ave. & district.	\$ -	\$ 85,711	\$ 85,711	0%
	00098904	Install a well level transducer at a well TBD, Connect to SCADA	\$ -	\$ 16,711	\$ 16,711	0%
	00099175	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 342,954	\$ 342,954	0%
	00099213	Vehicle Replacements > 120,000 miles	\$ 87,245	\$ 87,245	\$ 0	100%
	00099230	The 2018 main replacement program will replace 1,838 feet of pipelines in the Oroville district at an estimated cost of \$159 per foot.	\$ 435,528	\$ 457,742	\$ 22,214	95%
	ORO0900	Meter Replacement Program	\$ 17,453	\$ 32,441	\$ 14,988	54%
<b>Specifics Total</b>			<b>\$ 575,824</b>	<b>\$ 1,808,059</b>	<b>\$ 1,232,235</b>	<b>32%</b>
<b>Non-Specifics Total</b>			<b>\$ 263,000</b>	<b>\$ 263,000</b>	<b>\$ -</b>	<b>100%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2018</b>			<b>\$ 838,824</b>	<b>\$ 2,071,059</b>	<b>\$ 1,232,235</b>	<b>41%</b>

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## C. DISCUSSION

The Oroville District recorded \$1,304,016 in annual average gross plant additions for the most recent six-year period 2009-2014.<sup>151</sup> **Table 6-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

**Table 6-C: Capital Budget Proposals vs. Recorded Expenditures– Oroville District**

Oroville (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 1,304.0	100%
ORA	\$ 292.0	\$ 815.4	\$ 1,155.6	\$ 838.8	\$ 775.5	59%
CWS	\$ 1,631.0	\$ 1,778.6	\$ 1,385.0	\$ 2,071.1	\$ 1,716.4	132%

ORA presents its analyses and recommended adjustments to CWS's requested capital budget for specific projects (Section 1), 2016-2018 Non-Specific projects (Section 2), and 2015 Budget (Section 3) below.

### 1. Specific Projects

#### *a. Replace Hydro-Pneumatic Tank – Station 15 (PID: 97507)*

CWS requests \$152,674 in 2016 to replace the hydro-pneumatic tank at Station 15. CWS states that the replacement will also include the installation of seismically stable anchors and liner to protect against corrosion.

CWS explains that the existing 5,000-gallon tank has a maximum operating pressure of 75 psi.<sup>152</sup> The Project Justification says that “the normal operating pressure is 40 psi to

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<sup>151</sup> Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

<sup>152</sup> CWS, 2015 General Rate Case, Oroville Project Justifications, July 2015, pg. ORO PJ-207.

1 80 psi and exceeds the rated pressure of 75 psi specified on the nameplate.”<sup>153</sup> However,  
2 during an October 23, 2015 phone call between CWS and ORA, CWS confirmed that the  
3 pressure tank currently operates between 40 and 60 psi, which does not exceed the  
4 nameplate’s rated pressure of 75psi.<sup>154</sup>

5 CWS provided an October 3, 2011 tank inspection report. The report explains that the  
6 “estimated remaining life of the vessel is calculated as 9.3 years based on operating  
7 pressure”, and that the “vessel be re-inspected in 4.65 years.”<sup>155</sup>

8 Because the tank operates below its nameplate’s rated pressure, and because the  
9 inspection report’s recommendation does not support replacement at this time, ORA  
10 recommends the Commission reject this project.

11 *b. Replace Forebay Walls, Screen, and Associated Appurtenances (PID*  
12 *99722)*

13 CWS requests \$221,015 in 2017 to make forebay improvements at the Oroville  
14 Treatment Plant.<sup>156</sup> A forebay is an open basin used for pre-treatment to dissipate energy  
15 of an incoming water source; large solids are screened out of the water to ensure that  
16 good water quality continue through the treatment process. At the Oroville Treatment  
17 Plant, the first point of entry of water from the Cherokee Reservoir and/or Pump Station  
18 14 is the forebay (see photo below).

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<sup>153</sup> Ibid, Name plate shows the operating design parameters of the tank.

<sup>154</sup> October 23, 2015 Phone call between CWS and ORA, 11am-12pm.

<sup>155</sup> CWS, 2015 General Rate Case, Oroville Project Justifications, July 2015, pg. ORO PJ-219 and 220, October 3, 2011, Mistras Inspection Report.

<sup>156</sup> Ibid, pg. ORO PJ-282.

**Figure 6-A - Oroville Treatment Plant Forebay**



The requested improvements include:

1. Replacing the steel grate screen with an automated traveling screen with a pump, filter, and control panel; replacing the wooden plank walls with stainless steel wing walls and beams; replacing two inoperable valves.
2. Increasing the forebay wall height by 18 inches.

*i. Replace Steel Grate Screen, Wing Walls, and Valves*

CWS explains that the existing steel grate screen requires manual cleaning. The reservoir can also overflow if the screen is clogged. CWS would like to replace it with an automated screen to prevent clogging. CWS also states that the wooden plank walls on the sides of the screen are also deteriorating and need to be replaced, and the two gate valves controlling flow out of the forebay are also in poor condition. Based on ORA's inspection, ORA recommends that this project be authorized.

*ii. Increase Forebay Wall Height to 18 inches*

1 CWS explains that “[t]he treatment plant is designed to run at 7.2 MGD; at the current  
2 height of the forebay the plant will only run at 6.5 MGD before the forebay will  
3 overflow.”<sup>157</sup> ORA inquired about the operating MGD of the treatment plant for the past  
4 three years (2013-November 17, 2015) and discovered that the treatment plant has never  
5 operated above 2.3 MGD (specifically, from 1.8 MGD to 2.3 MGD).<sup>158</sup> Although CWS  
6 explains that it used a 10-year average MGD for the treatment plant’s design, it is clear  
7 from the last three years that with conservation measures in place and reductions in urban  
8 water use, the treatment plant has been operating well below its design capacity and does  
9 not need to increase its capacity. Therefore, there is no need to increase the forebay’s  
10 wall. ORA recommends this portion of the project be rejected.

11 ORA removes the \$35,000 (before overhead and escalation) from CWS’s project cost  
12 estimate, and recommends an adjusted budget of \$167,255.

13 *c. Panelboard and Generator Replacement – Station 15 (PID: 98715)*

14 CWS requests \$429,283 in 2016 to replace the panelboard and generator at Station 15.  
15 CWS explains that the generator and panelboard are both old and in need of  
16 replacement.<sup>159</sup> The generator was installed in 2000.<sup>160</sup> CWS provided the generator  
17 usage log reports in response to Data Requests SN2-009. The usage logs record both  
18 generator “test runs” for preventive maintenance and “emergency runs.” The 2011-2015  
19 generator usage logs indicate that the generator was only used for “test runs” but never

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<sup>157</sup> CWS Response to ORA Data Request DG-021, Q.3.

<sup>158</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (November 17, 2015, 2:28PM PT) (on file with author).

<sup>159</sup> CWS Oroville Project Justifications, July 2015, pg. ORO PJ-258.

<sup>160</sup> CWS Response to ORA Data Request SN2-009, Q. 1(a). Attachment.

1 for “emergency runs.”<sup>161</sup> Since CWS did not indicate if any emergencies occurred during  
2 the 2011 to 2015 period, ORA concludes that the successful “test runs” indicate that the  
3 generator is still operational and would be available for use during emergencies.  
4 Therefore, ORA does not recommend the replacement of this generator because it is still  
5 operational.

6 CWS explains that the panelboard was installed in 1976 and is old and deteriorating.  
7 CWS replaced a few of the panelboard parts in the past three years.<sup>162</sup> No other  
8 information was provided regarding the condition of the panelboard. In response to DR  
9 DG-005, CWS sent the panelboard inspection reports dated June 7, 2012; however, none  
10 of the inspection reports recommend the panelboard be replaced.<sup>163</sup> ORA also asked for  
11 the panelboard specification sheet; however, CWS only responded by referring to the  
12 Project Description in the Oroville Project Justification Report.<sup>164</sup> The Project  
13 Description is vague and does not include detailed information about the specific  
14 components of the panelboard. Without this information, ORA cannot verify CWS’s  
15 claims about the components or which of the components have been identified for  
16 replacement and the reason for the replacement. Therefore, ORA recommends the  
17 Commission reject this project.<sup>165</sup>

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<sup>161</sup> CWS Response to ORA Data Request DG-005, ORO15\_run\_logs\_2011-2015.

<sup>162</sup> CWS Oroville Project Justifications, July 2015, pg. ORO PJ-258, Lines 25-26.

<sup>163</sup> CWS Response to ORA Data Request DG-005, Attachment C.

<sup>164</sup> Ibid, Q.5.a.

<sup>165</sup> CWS Response to ORA Data Request DG-005, Attachment C.

1 *d. Install solar panel equipment to power the treatment plant (PID:*  
2 *97871)*

3 CWS requests \$749,656 in 2018 to install a 149-kW photovoltaic ground mounted solar  
4 system at the Oroville Treatment Plant to offset 100% of the purchased power for the  
5 Treatment Plant. CWS explains that the project “will contribute to the State of  
6 California’s requirement of achieving 33% of renewable energy by 2020”<sup>166</sup> and will also  
7 help decrease power costs to consumers. CWS estimates a 13-year payback<sup>167</sup> assuming  
8 an average Pacific Gas & Electric Company’s (PG&E) rate increase of 6% per year.

9 As part of its estimate for this project, CWS reflected a Federal Tax Credit of \$215,423,  
10 or 30% of the total project cost. In addition to the rebates, CWS also reflected potential  
11 purchased power savings totaling \$34,748 in 2018 to \$74,115 in 2031, which is the year  
12 the project would break-even if PG&E’s rates increases 6% each year.

13 In the justification for the proposed project was a quote from a solar vendor, Chico  
14 Electric. As part of the quote, Chico Electric analyzed CWS consumption data from the  
15 12 months ending with March 2014 using CWS’s electric usage patterns to determine the  
16 optimal system size. Chico Electric took into account the two meters located at the  
17 Treatment Plant, Meter #1000940689 (Pump Station) and Meter #1005516045 (Fluoride  
18 Feed) to get a combined 12-month usage of 231,837 kWhs.<sup>168</sup> Based on this data, Chico

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<sup>166</sup> CWS 2015 General Rate Case, Oroville Project Justifications, July 2015, pg. ORO PJ-291, Line 24.

<sup>167</sup> Ibid, pg. ORO PJ-291, Line 56.

<sup>168</sup> Ibid, pg. ORO PJ-295, Attachment B.

Electric concludes that a 149- kW photovoltaic ground mounted solar system would be required to offset 100% of the kWh usage.<sup>169</sup>

In its justification for this project, CWS included a “Capital Project Cost Impact Analysis” (Attachment 6-1 at end of this chapter) in which the Company calculated several parameters associated with the proposed solar project over the 30-year life of the project, including: (1) rate base; (2) revenue requirement; (3) depreciation cost; (4) annual capital customer expenditure; (5) reduction to federal income tax; (6) total annual customer expense; (7) remaining electrical expense; (8) inflated electrical power expense; (9) saved annual electrical expense; and (10) the net present value (NPV) related to items 4, 6, 7, 8, and 9. From this cost impact analysis, CWS calculated the positive NPVs shown in **Table 6-D** below.

**Table 6-D: Net Present Values With Assumed Federal Tax Credit**

Description	NPV Amount
Annual Capital Customer Expenditure	\$1,006,604.98
Total Annual Customer Expense	\$803,375.80
Remaining Annual Electrical Expense	\$0.00
Inflated Electrical Power Expense	\$1,016,215.76
Saved Annual Electrical Expense	\$1,016,215.76

In addition, CWS’s analysis reflects that the break-even point for this project would occur in 2031.<sup>170</sup>

CWS indicated that the PG&E expenses were based on its inflated electrical power expense over the 30-year life of the proposed solar project by using the total recorded 2013 power expenses (before credits and adjustments) and inflating this amount (and subsequent years) by the 6% inflation rate. However, ORA’s review of CWS’s “Oroville

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<sup>169</sup> Ibid, pg. ORO PJ-295.

<sup>170</sup> CWS Response to ORA Data Request DG-005, Q.13.g.

1 Power Cost and Usage 2010-2014”<sup>171</sup> found that power usage fluctuated between 2010  
2 and 2014. Of note is the reduction from 237,507 kW in 2010 to 210,013 kW to 2011 and  
3 a 25% reduction in power usage from 2013 to 2014.

4  
5 CWS assumes the Inflated Electrical Power Expense using a 6% inflation rate. CWS also  
6 uses the 6% inflation rate in its Net Present Value calculations. However, ORA disagrees  
7 with this methodology. Instead, ORA proposes using the 6% rate only for the calculation  
8 of the PG&E rates. A different rate should be used to calculate NPV. The change to the  
9 assumed rates could change the justification for the project.

10  
11 Chico Electric assumes that using the March 2013 to March 2014 power usage is best for  
12 determining the size of the solar system required (231, 837 kWhs). ORA disagrees with  
13 this methodology and proposes using the five year average power usage (2010 to 2014) to  
14 determine the required solar system size (223,134 kWhs). This would result in a lower  
15 estimated power usage. This change to the assumed power usage could also change the  
16 justification for the project.

17 Furthermore, the operations at the Oroville Treatment Plant demonstrate the District’s  
18 conservation efforts. “The treatment plant is designed to run at 7.2 MGD.”<sup>172</sup> However,  
19 in the past three years (Year 2013 to November 17, 2015), the treatment plant has been  
20 operating between 2.3 MGD and 1.8 MGD.<sup>173</sup> In this GRC, Oroville’s annual  
21 conservation budget forecast is \$24,252 to support further conservation in Oroville.

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<sup>171</sup> CWS Response to ORA Data Request DG-011, Q.1.a. Attachment “Oroville Power Cost and Usage 2010-2014”.

<sup>172</sup> CWS Response to ORA Data Request DG-021, Q.3.

<sup>173</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (November 17, 2015, 2:28PM PT) (on file with author).

1 CWS's analysis fails to take into account this lower customer usage and the  
2 corresponding power usage at the treatment plant.

3 Moreover, CWS did not evaluate other potential lower cost options such as leasing a  
4 solar system or purchasing power from a solar energy provider to determine the most cost  
5 effective option for ratepayers. CWS only explained that tax benefits of solar installation  
6 projects are given to the third party lease provider rather than CWS,<sup>174</sup> yet it fails to  
7 quantify how that would cause lease cost to be higher than purchase cost.<sup>175</sup>

8 In addition, CWS proposes this project in 2018. This is questionable because customers  
9 would not capture expense savings in this GRC since 2018 is not used to set rates for this  
10 2016 Test Year GRC.

11 ORA does not debate the merits of CWS utilizing solar power as an alternative source of  
12 energy. However, a project of this magnitude should be the most cost effective option  
13 over the long term and results in real savings to ratepayers. As demonstrated by ORA's  
14 discussion above, CWS's aggressive assumptions on rate increases and internal rate of  
15 return (IRR) establish justification for the project. However, adjusting the assumptions  
16 could change the conclusion. In addition, continuing conservation efforts will translate to  
17 lower electrical expenses, which could also change the justification for the project.

18 ORA recommends that the Oroville Treatment Plant solar project be rejected because 1)  
19 ORA disagrees with the methodology used to calculate the solar system size; 2) ORA  
20 disagrees with CWS's use of the 6% inflation rate for calculating both power rates and  
21 NPV; 3) CWS did not evaluate other potential lower cost options such as leasing a solar  
22 system or purchasing power from a solar energy provider to determine the most cost

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<sup>174</sup> CWS 2015 General Rate Case, Oroville Project Justifications, July 2015, pg. ORO PJ-291.

<sup>175</sup> CWS Response to ORA Data Request DG-005, Q.13.h.

1 effective option for ratepayers; 4) Continuing conservation efforts will translate to future  
2 lower electrical expenses; and 5) ORA questions why CWS proposed this project in 2018  
3 since customers would not capture expense savings in this 2017 Test Year GRC.

4 *e. Replacement of Pump and 100-Hp Motor – Station 2 (PID: 99022)*

5 CWS requests \$101,113 in 2016 to replace the pump and 100-Hp motor at Station 2. The  
6 pump has a pump efficiency rating of “Fair.” ORA recommends disallowing this project;  
7 see CWS’s and ORA’s pump and motor replacement approaches and proposals in ORA’s  
8 Report on Plant – Common Issues.

9 *f. Treatment Plant Driveway and Parking Area Paving (PID: 98716)*

10 CWS requests \$132,314 in 2017 to repave approximately 8,000 square feet of the  
11 Oroville Treatment Plant’s driveway, parking area, loading area, and filter area. CWS  
12 explains that the pavement is in poor condition.<sup>176</sup> ORA observed the poor condition of  
13 the pavement during the site visit on October 1, 2015. ORA recommends this request be  
14 authorized but with an adjusted budget. CWS requests a similar proposed project (PID  
15 98457) in Willows to repave the cracked and broken asphalt at Station 2; that project  
16 consists of repaving an area of 16,612 square feet with an estimated total budget of  
17 \$17,229. The Oroville repaving project is approximately 8,000 square feet, which is less  
18 than half of the Willows repavement project; therefore, it should have an estimated cost  
19 of about half which is \$8,300 and not \$132,000. ORA recommends this request be  
20 authorized but with an adjusted budget of \$8,300.

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<sup>176</sup> CWS 2015 General Rate Case, Oroville Project Justifications, July 2015, pg. ORO PJ-273.

1 *g. Vehicle Replacement (PID: 99417)*

2 CWS requests \$74,300 in 2016 for the replacement of a dump truck. For reasons  
3 presented in ORA's Report on Plant – Common Issues, ORA recommends the request be  
4 rejected.

5 *h. Small and Large Meter Replacement Program (PID: ORO0900)*

6 **Table 6-E** below lists CWS's requests and ORA's recommendation on the replacement  
7 budget of small and large meters in the Oroville District. ORA's recommended budgets  
8 are based on detailed analysis and recommendation in its Report on Plant – Common  
9 Issues.

10 **Table 6-E: Meter Replacement Budgets – Oroville District**

District:	Oroville		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 16,670	\$ 30,878
2017	0900	\$ 17,064	\$ 31,649
2018	0900	\$ 17,453	\$ 32,441

11  
12 *i. Pipeline Replacement Program (PIDs: 99228, 99229, and 99230)*

13 CWS requests \$435,685 in 2016, \$446,577 in 2017, and \$457,742 in 2018 to replace  
14 1,838 feet of pipeline per year. ORA evaluated the leak rate, water loss, system age,  
15 results of the American Water Works Association's recommended pipeline replacement  
16 model, historical replacement rate, and replacement cost for each district and provided a  
17 detailed evaluation of CWS's pipeline replacement proposal in ORA's Common Plant  
18 Issues Testimony (see ORA's Report on Plant – Common Issues). **Table 6-F** below  
19 shows ORA's recommendations for a reasonable amount of pipeline replacement and the  
20 associated budget in this district.

**Table 6-F: Pipeline Replacement Program Budget – Oroville District**

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099228	1,464	\$ 416,001	1,838	\$ 435,685
2017	00099229	1,464	\$ 425,819	1,838	\$ 446,577
2018	00099230	1,464	\$ 435,528	1,838	\$ 457,742

*j. Replace SCADA Software and Hardware (PID: 99175)*

CWS requests \$342,954 in 2018 for the replacement of the SCADA system server and software program. ORA's Report on Plant – Common Issues presents its recommended disallowance of this budget.

*k. Vacuum Trailer or Excavation Trailer (PID: 98031)*

CWS requests \$54,633 in 2016 to purchase a vacuum trailer or excavation trailer. CWS explains that the trailer is used to “expose leaking services and leaking mains to make repairs quickly and safely.”<sup>177</sup> In response to ORA's inquiry, CWS states that the Oroville District already has a vacuum trailer and there are many throughout the company.<sup>178</sup> CWS did not explain why it needs two vacuum trailers in this district. Since the Oroville District already has a vacuum trailer, it is not necessary to purchase an additional one. Therefore, ORA recommends the request be rejected.

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<sup>177</sup> California Water Service, 2015 General Rate Case, Oroville Project Justifications, July 2015, pg. ORO PJ-7.

<sup>178</sup> CWS Response to ORA Data Request DG-005, Q. 2.b.

1 *l. Replace manager's desk and add new tables and chairs in meeting*  
2 *room (PID: 98700)*

3 CWS requests \$11,145 in 2016 to replace the manager's desk and the conference room's  
4 tables and chairs. CWS explains that the manager's desk, which was purchased in 1990,  
5 is now too small for all the files. CWS also explains that the drawers need to be repaired  
6 when they come off track.<sup>179</sup> During the Oroville District Tour, ORA found the desk to  
7 be in good condition (see photo below).

8 **Figure 6-B Manager's Desk**



9  
10 The manager can store files in a file cabinet which would eliminate the need for a larger  
11 desk. ORA recommends the desk replacement request be rejected.

12 The Oroville District Office's meeting room currently has folding tables and chairs.  
13 However, CWS explains that more permanent conference room furniture is desired.  
14 Based on ORA's observations of other CWS offices, ORA determined that the  
15 conference room furniture in Oroville is adequate. Therefore, ORA recommends the  
16 request be rejected.

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<sup>179</sup> Ibid, Q. 3.a.

1 *m. New lawn mower, weed eater, and leaf blower (PID: 98103)*

2 CWS requests \$2,185 in 2016 to purchase a new lawn mower, weed eater, and leaf  
3 blower. CWS explains that it already has two lawn mowers in the Oroville District which  
4 were purchased in 2009 and 2015; however, one will be replaced.<sup>180</sup> CWS explains that  
5 the larger stations require multiple lawn mowers to complete the work in a timely  
6 manner.<sup>181</sup> ORA questions why CWS is maintaining lawns during the current drought.  
7 CWS did not provide details on the time it considers necessary and reasonable to  
8 complete mowing a station, did not specify which lawn mower will be replaced, and also  
9 recently purchased various tools for gardening (PID 63915). For these reasons, ORA  
10 recommends the request be rejected.

11 *n. Replace flow meter at Station 10 (PID: 98902)*

12 CWS requests \$29,873 in 2016 to replace the flow meter at Station 10 to enable SCADA  
13 monitoring. According to CWS, the existing flow meter was installed in 1995.<sup>182</sup> CWS  
14 provided a maintenance log for the existing flow meter, which showed a total of two  
15 work orders for this flow meter between 2005 and 2015, both for calibrating the flow  
16 meter.<sup>183</sup> One of the work orders has been closed and the second dated August 2015  
17 shown as being approved for work. ORA does not know the current status of this  
18 specific work order. Since the first of the work orders was closed and for reasons

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<sup>180</sup> Ibid, Q. 2.d.

<sup>181</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (December 11, 2015, 4:04PM PT) (on file with author).

<sup>182</sup> Email from Kitty Wong of CWS to Susana Nasserie of ORA (January 14, 2015, 10:30AM PT) (on file with author).

<sup>183</sup> CWS Response to ORA Data Request SN2-012, Q. 2. Attachment q.\_e.\_1.

1 identified in ORA's Report on Plant - Common Issues, ORA concludes that the flow  
2 meter was recalibrated and is within the acceptable accuracy range. The existing flow  
3 meter is not in need of replacement because it is functioning properly. ORA cannot  
4 recommend the flow meter be replaced for the sole purpose of enabling SCADA  
5 monitoring if the flow meter is functioning properly. Therefore, ORA recommends the  
6 Commission reject this project.

7 *o. Install well level transducers at various stations (PIDs: 98905, 98903,*  
8 *and 98904)*

9 CWS requests \$15,906 in 2016, \$16,304 in 2017, and \$16,711 in 2018 to install a well  
10 level transducer in one station per year. In Data Request Response DG-024, CWS  
11 explains that currently, a CWS employee takes well level readings once a month.  
12 However, CWS explains that once-a-month readings do not provide enough data points  
13 for identifying production trends. The well level transducers would allow for daily  
14 readings, which would allow CWS to better identify production trends.<sup>184</sup>

15 CWS explains that the cost associated with manual reading is approximately \$65 per  
16 month or \$780 per year.<sup>185</sup> In comparison, the well level transducer has an annual  
17 revenue requirement of \$2,250.<sup>186</sup> The current monthly readings should provide adequate  
18 data to determine the well levels and trends for production planning purposes. Therefore,  
19 it is not a prudent investment at this time and ORA recommends this project be rejected.

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<sup>184</sup> CWS Response to ORA Data Request DG-021, Q. 5.

<sup>185</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (December 14, 2015, 4:06PM PT) (on file with author).

<sup>186</sup> Ibid.

1                    *p. Install a solar powered wireless transmitter and level transducer at the*  
2                    *Oroville Treatment Plant (PID: 98912)*

3 CWS requests \$58,219 in 2016 to install a solar powered wireless transmitter and level  
4 transducer at the Oroville Treatment Plant's Cherokee Reservoir to monitor the water  
5 level in the reservoir as it is filled at night.<sup>187</sup> CWS explains that because CWS currently  
6 just guesses how long it takes to fill the reservoir, and if the water level reaches the top of  
7 the reservoir, it leaks out onto the road.<sup>188</sup>

8 CWS did not provide the dates or specific incidents during which water leaks over the  
9 top. CWS should improve its calculations on how many hours it takes to fill to the top.

10 In this GRC, Oroville's annual conservation budget forecast is \$24,252 to support further  
11 conservation in Oroville. CWS's analysis fails to take into account this lower customer  
12 usage and the corresponding power usage at the treatment plant.

13 Therefore, ORA recommends the Commission reject this project.

14                    *q. Conceptual design and planning for reservoir improvements (PID:*  
15                    *97517)*

16 CWS requests \$22,103 in 2017 to begin conceptual design and planning work to improve  
17 the Cherokee reservoir. CWS explains that the reservoir is near a public roadway and  
18 there is a risk of a car mistakenly veering off the road into the reservoir due to the poor  
19 roadway lighting.<sup>189</sup> CWS is proposing that the reservoir be:

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<sup>187</sup> Email from James Polanco of CWS to Daphne Goldberg of ORA (December 11, 2015, 5:09PM PT) (on file with author).

<sup>188</sup> Ibid.

<sup>189</sup> CWS Response to ORA Data Request DG-005, Q. 10.a.

1 Offset up to 15 feet away from the road and increase the height of the reservoir by  
2 approximately 5 feet to make up the volume. As part of the improvements, a  
3 ramp would be installed to ease maintenance when sweeping the basin. The basin  
4 is due to be relined and new fencing is also proposed for security purposes since  
5 the ground is eroding under the existing fence leaving large gaps.

6 CWS explains that “[n]o vehicles have caused damage to or have entered Cal Water’s  
7 reservoir in Oroville.”<sup>190</sup> CWS is concerned about the proximity of the reservoir to a  
8 roadway; however, CWS has not indicated that it has evaluated alternatives such as  
9 installing a road barrier between the road and the reservoir, better lighting or signage  
10 around the reservoir. It is unclear why it is an issue at this facility, particularly when  
11 there has never been an incident. Furthermore, CWS is only “in the planning stage and  
12 will research all permits necessary for this project.”<sup>191</sup> CWS is only in the planning  
13 stages of this project and has not evaluated what permits would be required. Therefore,  
14 ORA cannot recommend that the Commission approve this project without a more  
15 detailed project plan.

## 16 **2. Non-Specific Budgets for 2016 to 2018**

17 CWS requests \$251,300 in 2016, \$257,100 in 2017, and \$263,000 in 2018 in the Non-  
18 Specific Budget to address unforeseen, unplanned, and emergency projects and  
19 regulatory compliant projects. ORA’s Report on Plant – Common Issues presents its  
20 recommended total disallowance of this budget

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<sup>190</sup> E-mail from James Polanco of CWS, to Daphne Goldberg of ORA (December 10, 2015, 9:54AM PT) (on file with author).

<sup>191</sup> Ibid.

1        **3. 2015 Capital Budget**

2        CWS requests \$1,631,000 for plant additions in 2015, which consist of projects  
3        authorized for 2015 in the last GRC and projects authorized from previous  
4        GRCs. ORA's Report on Plant - Common Issues presents its analysis and basis for the  
5        adjusting the 2015 capital additions for Oroville.

6        **D. CONCLUSION**

7        ORA's recommendations presented above have been incorporated in the calculations for  
8        ORA's estimated Plant in Service shown in Table 7-1 in its Company-wide Report,  
9        Appendix RO.

# Attachment 6-1: Capital Project Cost Impact

## Analysis – Oroville District

### 2018 ORO 97871 Solar Attachment A Cost Impact

### ATTACHMENT FOR QUESTION 19

California Water Service Company - Capital Project Cost Impact Analysis	
Bidding Firm	Chico Electric
Rated Power Output	146 kW DC
Price per Kilowatt at 2013	\$0.112 /kW
Annual Power Production	231.837 MWh/yr
Annual Energy Usage	231.837 MWh/yr
Inflation Rate	6.00%
Depreciation Period	30 Years
Rate of Return	7.94%
Net to Gross Multiplier	1.35
Revenue Requirement Rate	10.7%
Percent Power Covered By Proj.	100.0%
Contractor Cost	\$460,040
10% contingency	\$46,004
29% Overhead	\$146,753
Escalation	\$65,280
Capital Cost	\$718,076

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)
Year	Rate Base Value	Revenue Requirement	Depreciation Cost	Annual Capital Customer Expenditure	Reduction to Federal Income Tax Credit 30%	Total Annual Customer Expense	Remaining Annual Electrical Expense	Inflated Electrical Power Expense	Saved Annual Electrical Expense
2018	\$718,076	\$77,142	\$0	\$77,142	\$215,423	(\$138,281)	\$0	\$32,781	\$34,748
2019	\$694,141	\$74,570	\$23,936	\$98,506		\$98,506	\$0	\$34,748	\$36,833
2020	\$670,205	\$71,999	\$23,936	\$95,935		\$95,935	\$0	\$34,748	\$39,043
2021	\$646,269	\$69,428	\$23,936	\$93,363		\$93,363	\$0	\$34,748	\$41,385
2022	\$622,333	\$66,856	\$23,936	\$90,792		\$90,792	\$0	\$34,748	\$43,869
2023	\$598,397	\$64,285	\$23,936	\$88,221		\$88,221	\$0	\$34,748	\$46,501
2024	\$574,461	\$61,713	\$23,936	\$85,649		\$85,649	\$0	\$34,748	\$49,291
2025	\$550,525	\$59,142	\$23,936	\$83,078		\$83,078	\$0	\$34,748	\$52,248
2026	\$526,589	\$56,571	\$23,936	\$80,506		\$80,506	\$0	\$34,748	\$55,383
2027	\$502,653	\$53,999	\$23,936	\$77,935		\$77,935	\$0	\$34,748	\$58,706
2028	\$478,717	\$51,428	\$23,936	\$75,364		\$75,364	\$0	\$34,748	\$62,228
2029	\$454,781	\$48,856	\$23,936	\$72,792		\$72,792	\$0	\$34,748	\$65,962
2030	\$430,845	\$46,285	\$23,936	\$70,221		\$70,221	\$0	\$34,748	\$69,920
2031	\$406,909	\$43,714	\$23,936	\$67,649		\$67,649	\$0	\$34,748	\$74,115
2032	\$382,973	\$41,142	\$23,936	\$65,078		\$65,078	\$0	\$34,748	\$78,562
2033	\$359,037	\$38,571	\$23,936	\$62,507		\$62,507	\$0	\$34,748	\$83,276
2034	\$335,101	\$35,999	\$23,936	\$59,935		\$59,935	\$0	\$34,748	\$88,272
2035	\$311,165	\$33,428	\$23,936	\$57,364		\$57,364	\$0	\$34,748	\$93,569
2036	\$287,229	\$30,856	\$23,936	\$54,792		\$54,792	\$0	\$34,748	\$99,183
2037	\$263,293	\$28,285	\$23,936	\$52,221		\$52,221	\$0	\$34,748	\$105,134
2038	\$239,357	\$25,714	\$23,936	\$49,650		\$49,650	\$0	\$34,748	\$111,442
2039	\$215,421	\$23,142	\$23,936	\$47,078		\$47,078	\$0	\$34,748	\$118,128
2040	\$191,485	\$20,571	\$23,936	\$44,507		\$44,507	\$0	\$34,748	\$125,216
2041	\$167,549	\$17,999	\$23,936	\$41,935		\$41,935	\$0	\$34,748	\$132,729
2042	\$143,613	\$15,428	\$23,936	\$39,364		\$39,364	\$0	\$34,748	\$140,692
2043	\$119,677	\$12,857	\$23,936	\$36,793		\$36,793	\$0	\$34,748	\$149,134
2044	\$95,741	\$10,285	\$23,936	\$34,221		\$34,221	\$0	\$34,748	\$158,082
2045	\$71,805	\$7,714	\$23,936	\$31,650		\$31,650	\$0	\$34,748	\$167,567
2046	\$47,869	\$5,142	\$23,936	\$29,078		\$29,078	\$0	\$34,748	\$177,621
2047	\$23,933	\$2,571	\$23,936	\$26,507		\$26,507	\$0	\$34,748	\$188,278
2048	(\$3)	(\$0)	\$23,936	\$23,936		\$23,936	\$0	\$34,748	\$199,575
Total Expenditure	\$1,195,692	\$1,195,692	\$718,076	\$1,913,768	\$215,423	\$1,698,345	\$0	\$2,946,691	\$2,946,691
Net Present Value				\$1,006,605		\$803,376	\$0	\$1,016,216	\$1,016,216

## **Chapter 7: Plant – Willows District**

### **A. INTRODUCTION**

This chapter presents ORA’s analyses and recommendations for Plant in Service for CWS’s Willows District.

### **B. SUMMARY OF RECOMMENDATIONS**

Based on ORA’s review and analysis of CWS’s requested plant additions, ORA recommends disallowance, adjustment, deferral, or Advice Letter treatment where appropriate. These recommendations form the basis of ORA’s recommended capital budget summary presented in **Table 7-A** below. ORA’s estimated plant additions also reflect recommendations in its Common Plant Issues testimony regarding Pipeline Replacements, Meter Replacements, Vehicle Replacements, and Supervisory Control and Data Acquisition (SCADA) Replacement.

**Table 7-A: Capital Budget Summary – Willows District**

Willows (\$000)	2015	2016	2017	2018	Annual Average
ORA	\$ 338.3	\$ 101.9	\$ 99.9	\$ 158.6	\$ 174.7
CWS	\$ 1,509.3	\$ 852.1	\$ 868.7	\$ 1,187.2	\$ 1,104.3
CWS > ORA	\$ 1,170.9	\$ 750.1	\$ 768.8	\$ 1,028.6	\$ 929.6
ORA as % of CWS	22%	12%	12%	13%	15%

**Table 7-B: Capital Budget Details – Willows District**

2015	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00062175	200 and 300 blocks of S Plumas St. - 960' 8" PVC; 23 1" Services; 2 Hydrants	\$ 231,213	\$ 276,629	\$ 45,416	84%
	00062175	200 and 300 blocks of S Plumas St. - 960' 8" PVC; 23 1" Services; 2 Hydrants	\$ 50,239	\$ 48,263	\$ (1,976)	104%
	00062175	200 and 300 blocks of S Plumas St. - 960' 8" PVC; 23 1" Services; 2 Hydrants	\$ 17,781	\$ 12,949	\$ (4,833)	137%
	00064276	Field - 2 New Handhelds for Meter Reading	\$ -	\$ 12,046	\$ 12,046	0%
	00064711	Flat to Meter Conversion	\$ -	\$ 38,127	\$ 38,127	0%
	WIL0900	Meter Replacement Program	\$ -	\$ 11,025	\$ 11,025	0%
	00102120	Replace Sacramento St Main 2015	\$ -	\$ 20,625	\$ 20,625	0%
	00102120	Replace Sacramento St Main 2015	\$ -	\$ 92,250	\$ 92,250	0%
	00102120	Replace Sacramento St Main 2015	\$ -	\$ 256,875	\$ 256,875	0%
	00098424	12" Main Replace - Cty Rd 53/Tehama	\$ -	\$ 516,107	\$ 516,107	0%
	00098424	12" Main Replace - Cty Rd 53/Tehama	\$ -	\$ 13,144	\$ 13,144	0%
	00098424	12" Main Replace - Cty Rd 53/Tehama	\$ -	\$ 45,652	\$ 45,652	0%
	00102352	Portable Turbidimeter	\$ -	\$ 1,248	\$ 1,248	0%
	00102199	Replace Fire Hydrant - Wood and Hum	\$ -	\$ 4,103	\$ 4,103	0%
	00101314	Willows Office Expansion	\$ -	\$ 15,480	\$ 15,480	0%
	00064276	Field - 2 New Handhelds for Meter Reading	\$ -	\$ 12,046	\$ 12,046	0%
	WIL0900	Meter Replacement Program	\$ -	\$ 11,025	\$ 11,025	0%
<b>Specifics Total</b>			<b>\$ 299,233</b>	<b>\$ 399,038</b>	<b>\$ 99,805</b>	<b>75%</b>
<b>Non-Specifics Total</b>			<b>\$ 39,099</b>	<b>\$ 121,661</b>	<b>\$ 82,562</b>	<b>32%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ 988,554</b>	<b>\$ 988,554</b>	<b>0%</b>
<b>TOTAL 2015</b>			<b>\$ 338,332</b>	<b>\$ 1,509,253</b>	<b>\$ 1,170,922</b>	<b>22%</b>

2016	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00099244	The 2016 main replacement program in the Willows district.	\$ 89,390	\$ 687,514	\$ 598,124	13%
	98316	Hydrant Meter Reduced Pressure Principal Assembly	\$ 4,302	\$ 4,302	\$ 0	100%
	WIL0900	Meter Replacement Program	\$ 8,239	\$ 18,141	\$ 9,902	45%
<b>Specifics Total</b>			<b>\$ 101,931</b>	<b>\$ 709,958</b>	<b>\$ 608,027</b>	<b>14%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 142,100</b>	<b>\$ 142,100</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2016</b>			<b>\$ 101,931</b>	<b>\$ 852,058</b>	<b>\$ 750,127</b>	<b>12%</b>

2017	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	00099246	The 2017 main replacement program in the Willows district.	\$ 91,499	\$ 704,702	\$ 613,203	13%
	WIL0900	Meter Replacement Program	\$ 8,433	\$ 18,596	\$ 10,163	45%
<b>Specifics Total</b>			<b>\$ 99,932</b>	<b>\$ 723,298</b>	<b>\$ 623,366</b>	<b>14%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 145,400</b>	<b>\$ 145,400</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2017</b>			<b>\$ 99,932</b>	<b>\$ 868,698</b>	<b>\$ 768,766</b>	<b>12%</b>

2018	Project #	Project Description	ORA	CWS	CWS > ORA	ORA / CWS
	98457	Reseal/Overlay hardscapes at Stations 11 and 2	\$ 16,233	\$ 17,229		
	99180	Replace the SCADA system server and software. This is a the district portion of a combined project to replace all of the SCADA system software and hardware throughout Cal Water.	\$ -	\$ 279,978	\$ 279,978	0%
	00099247	The 2018 main replacement program in the Willows district.	\$ 93,586	\$ 722,320	\$ 628,734	13%
	WIL0900	Meter Replacement Program	\$ 8,626	\$ 19,060	\$ 10,434	45%
	99264	Vehicle Replacements > 120,000 miles	\$ 40,179	\$ 40,179	\$ -	100%
<b>Specifics Total</b>			<b>\$ 158,624</b>	<b>\$ 1,038,588</b>	<b>\$ 879,964</b>	<b>15%</b>
<b>Non-Specifics Total</b>			<b>\$ -</b>	<b>\$ 148,600</b>	<b>\$ 148,600</b>	<b>0%</b>
<b>Carry-Overs Total</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
<b>TOTAL 2018</b>			<b>\$ 158,624</b>	<b>\$ 1,187,188</b>	<b>\$ 1,028,564</b>	<b>13%</b>

### C. DISCUSSION

The Willows District recorded \$861,170 per year in average gross plant additions for the most recent six-year period 2009-2014.<sup>192</sup> **Table 7-C** compares CWS's and ORA's estimates against recorded annual average gross plant additions.

<sup>192</sup> Gross plant additions include company funded plant additions as well as contributions and advance deposits for specific plant.

**Table 7-C: Capital Budget Proposals vs. Recorded Expenditures– Willows District**

Willows (\$000)	2015	2016	2017	2018	Annual Average	% of Recorded
2009-2014 Recorded	--	--	--	--	\$ 861.2	100%
ORA	\$ 338.3	\$ 101.9	\$ 99.9	\$ 158.6	\$ 174.7	20%
CWS	\$ 1,509.3	\$ 852.1	\$ 868.7	\$ 1,187.2	\$ 1,104.3	128%

ORA presents its analyses and recommended adjustments to CWS’s requested capital budget for specific projects (Section 1), 2016-2018 Non-Specific projects (Section 2), and 2015 Budget (Section 3) below.

#### **4. Specific Projects**

##### *a. Reseal/Overlay landscapes at Stations 11 and 2 (PID: 98457)*

CWS originally requested \$17,229 in 2018 to reseal the asphalt at Station 11 (960 square feet)<sup>193</sup> and Station 2 (15,652 square feet).<sup>194</sup> However, during the September 30, 2015 Willows District Tour, ORA visited both Stations 11 and 2 and observed that Station 11 asphalt was in good condition, as shown in the photo below.

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<sup>193</sup> CWS Response to ORA Data Request DG-019, Q. 1.a.

<sup>194</sup> Ibid.

1

**Figure 7-A: Station 11-Willows District**



2

3 Consequently, CWS informed ORA during the tour that it would cancel the Station 11  
4 reseal project. CWS and ORA also visited Station 2 and saw the poor condition of the  
5 asphalt, such as cracked and broken asphalt in many areas, as shown in the photos below.

6

**Figure 7-B: Station 2 – Willows District**



7

8 The Station was last resealed in November 2011<sup>195</sup>. Therefore, ORA recommends  
9 authorization of the Station 2 reseal project with an adjusted project cost of \$16,233.<sup>196</sup>

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<sup>195</sup> Ibid, Q. 1.b.

*b. Small and Large Meter Replacement Program (PID: WIL0900)*

**Table 7-D** below lists CWS's requests and ORA's recommendation on the replacement budget of small and large meters in the Willows District. ORA's recommended budgets are based on detailed analysis and recommendation in its Report on Plant – Common Issues.

**Table 7-D: Meter Replacement Budgets – Willows District**

District:	Willows		
YEAR	PID	ORA's Recommendation	CWS's Proposal
2016	0900	\$ 8,239	\$ 18,141
2017	0900	\$ 8,433	\$ 18,596
2018	0900	\$ 8,626	\$ 19,060

*c. Pipeline Replacement Program (PIDs 99244, 99246, 99247)*

CWS requests \$687,514 in 2016, \$704,702 in 2017, and \$722,320 in 2018 to replace 2,135 feet of pipeline per year. ORA evaluated the leak rate, water loss, system age, results of AWWA's recommended pipeline replacement model, historical replacement rate, and replacement cost for each district and provided a detailed evaluation of CWS's pipeline replacement proposal in ORA's Report on Plant - Common Issues. **Table 7-E** below shows ORA's recommendations for pipeline replacement and the associated budget in this district.

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<sup>196</sup> Ibid, Q. 1.a.

**Table 7-E: Pipeline Replacement Requests – Willows District**

YEAR	PID	ORA's Recommendation		CWS's Proposal	
		Length (ft)	Budget	Length (ft)	Budget
2016	00099244	371	\$ 89,390	2,135	\$ 687,514
2017	00099246	371	\$ 91,499	2,135	\$ 704,702
2018	00099247	371	\$ 93,586	2,135	\$ 722,320

***d. Replace SCADA Software and Hardware (PID: 99180)***

CWS requests \$279,978 in 2018 for the replacement of the SCADA system server and software program. For reasons presented in ORA's Report on Plant - Common Issues, ORA recommends disallowing this project.

**5. Non-Specific Budgets for 2016 to 2018**

CWS requests \$142,100 in 2016, \$145,400 in 2017, and \$148,600 in 2018 in the Non-Specific Budget to address unforeseen, unplanned, and emergency projects and regulatory compliant projects. ORA's Report on Plant - Common Issues presents ORA's recommended total disallowance for this budget. 2015 Budget

CWS requests \$1,509,253 for plant additions in 2015, which consist of projects authorized for 2015 in the last GRC and projects authorized from previous GRCs. ORA's Report on Plant - Common Issues presents its analysis and for the adjusting 2015 capital additions for Willows.

**D. CONCLUSION**

ORA's recommendations presented above have been incorporated in the calculations for ORA's estimated Plant in Service shown in Table 7-1 in its Company-wide Report, Appendix RO.